ON THE GRILL
MySQL's Mårten Mickos explains how his open-source software company thrives even though most users don't pay. **PAGE 18**

READY OR NOT
IT managers expect end users to call on them for iPhone support. **PAGE 6**

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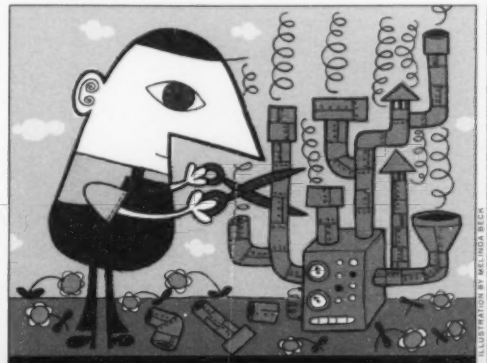

ILLUSTRATION BY MELINDA BECK

SEVEN STEPS TO A Green Data Center

Page 23

Data center power use is surging toward a crisis, but there are things you can do today to cut consumption without sacrificing performance or blowing your budget. Robert L. Mitchell lays out the plan.

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Linux Camp Divided On Microsoft Deals

Some vendors balk at patent claims; others agree to terms

BY TODD R. WEISS

The Linux community is splitting — right down the middle, at this point — over Microsoft Corp.'s controversial claims that the open-source operating system infringes on patents it holds.

Last Tuesday, Paris-based Mandriva became the third Linux vendor within five days to say it isn't interested in signing a licensing deal with Microsoft to avoid possible infringement claims. A blog posting to that effect by Mandriva CEO Francois Bancilhon followed similar declarations by officials at Red Hat Inc. and Canonical Ltd., which oversees Ubuntu Linux.

But earlier this month, Microsoft announced collaboration agreements with Xandros Inc. and Linspire Inc. that included patent covenants absolving them of any charges that their Linux distributions infringe on Microsoft intellectual property. Those deals were similar to the highly publicized agreement that Microsoft and Novell Inc., the developer of SUSE Linux, signed last fall.

DEAL MAKERS AND BREAKERS

Linux vendors that have signed agreements with Microsoft:
Novell • Xandros • Linspire

Vendors that have declined to negotiate:
Red Hat • Canonical (Ubuntu Linux) • Mandriva

Broward County Public Schools in Sunrise, Fla., uses Linux throughout its operations. CIO Vijay Sonty said via e-mail that the split between Linux vendors over dealing with Microsoft "is not good for open source" and could give Microsoft an advantage in pressing its patent claims.

Sonty added that he thinks Microsoft "is lining up partners to go against" Red Hat and Ubuntu, which he sees as the company's biggest threats in the Linux camp. "The battle is just beginning," he wrote. "We don't know what is under-

Linux, page 40

Legislators Knock DHS CIO For IT Security Weaknesses

Charbo defends steps taken by agency

BY JAIKUMAR VIJAYAN

Members of a U.S. House subcommittee last week blasted Department of Homeland Security CIO Scott Charbo for what they called a lack of leadership on information security issues and questioned his willingness to make needed fixes — and even his ability to head the agency's IT organization.

The stinging criticisms leveled at Charbo illustrate the complexity of the challenge he has faced since taking over as CIO of the DHS in July 2005: developing a unified IT infrastructure for the 22 separate agencies that were cobbled together to create the DHS.

Charbo rebutted the charges at a hearing held Wednesday by the subcommittee, which is investigating cybersecurity vulnerabilities at the DHS. He said that much of the criticism of the agency's security capabilities was based on outdated information that ignored some of the improvements the DHS has made to its IT defenses.

"I'm confident that the DHS information security program is moving in the right direction," Charbo said in his prepared testimony. "Although we still have a ways to go, we've made measurable improvements in the management of information security."

But that didn't dissuade legislators such as Rep. Ben-

DHS Security, page 40

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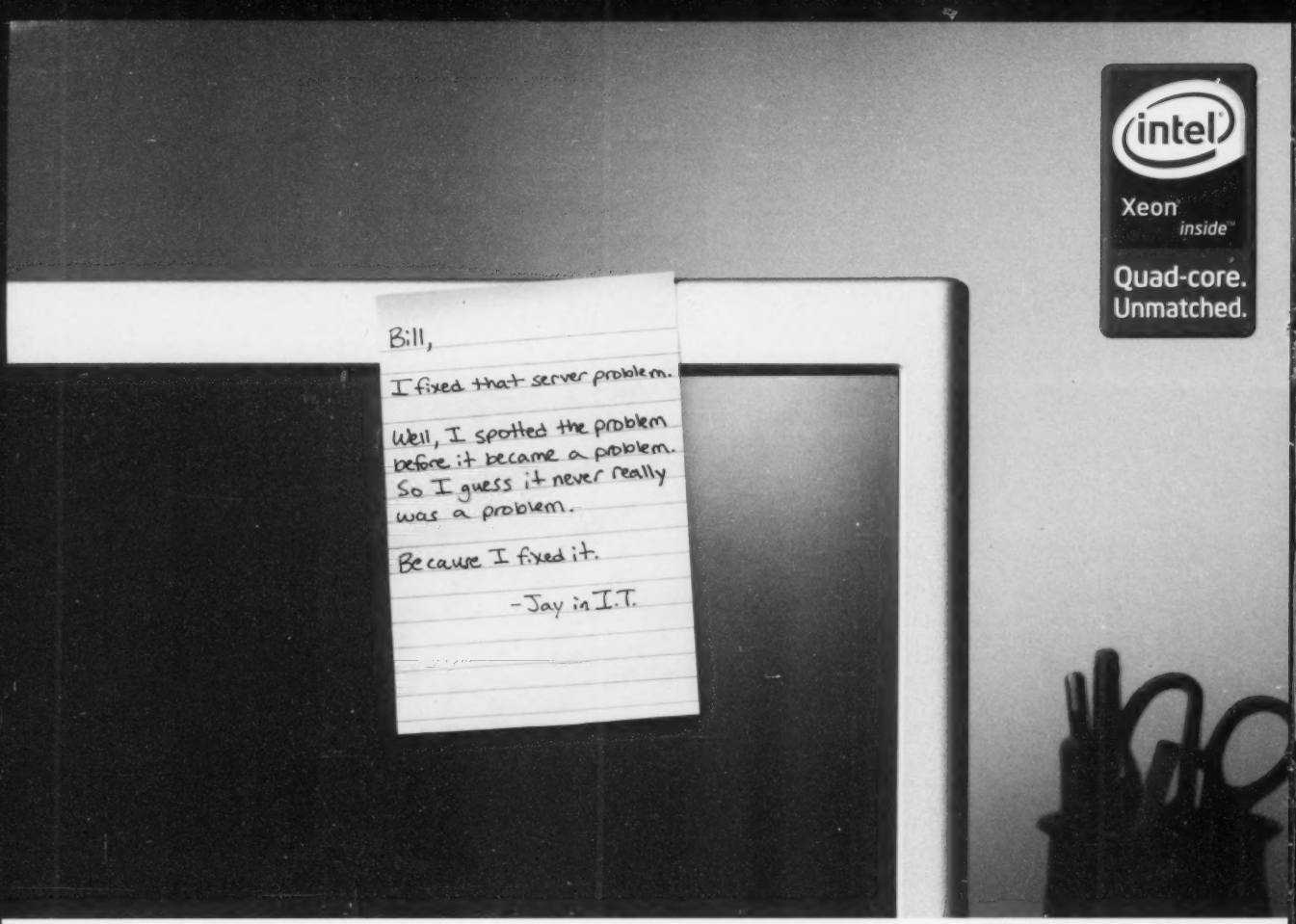
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Life Beyond Google: A Look at Alternative Search Engines

NETWORKING: Our reviewer examines four sites and finds that they're using some interesting tacks to try to get a slice of Google's pie.

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MOBILE/WIRELESS: Devices to help you get the most out of your summer. www.computerworld.com/mobilewireless

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TechGear: The Coming War Over iPhone

MOBILE/WIRELESS: Mike Elgan says a war is shaping up between IT people responsible for corporate data security and gadget-loving users who will want to connect to the Wi-Fi network at work and carry sensitive company data around on their iPhones.

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Execs Outline Hurdles To Offshore Work

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AT DEADLINE

Pentagon Turns Off E-mail After Breach

A security breach within the office of Defense Secretary Robert Gates prompted the Pentagon to shut down about 1,500 computers. Gates said classified e-mail systems were taken offline because of "a detected penetration." U.S. Department of Defense officials declined to provide further details, including the specific number of systems affected by the shutdown. "A variety of precautionary measures are being taken," Gates said.

ITC Refuses to Lift Qualcomm Ban

The U.S. International Trade Commission denied a request by Qualcomm Inc. to lift a ban on the importation into the U.S. of cell phones containing some Qualcomm chips. The company sought a stay of the ban during its appeal of a patent infringement lawsuit filed against it by Broadcom Corp. The ITC ruled that Qualcomm failed to meet a "four-prong test" applied by courts to determine whether to grant preliminary injunctions.

Glitch Causes United To Cancel Flights

United Air Lines Inc. was forced to cancel 24 domestic flights last Wednesday because of a failure of computers used to dispatch its flights. The outage also resulted in delays of about 268 domestic and international flights for an average of 90 minutes. United said that it does not know what caused the outage, which "affected the systems that United uses to dispatch flights for departure."

Defense Department Renews Unisys Pact

The Department of Defense extended Unisys Corp.'s contract to manage the Pentagon's global logistics network, which is based on radio frequency identification technology. The DOD and Unisys signed a one-year pact with three one-year options. The deal is potentially worth $12 million.

IT Braces for iPhone Debut

Tech workers expect end users to push for support of Apple's new device

BY MATT HAMBLEN

As Friday's scheduled release of Apple Inc.'s iPhone draws ever closer, some IT managers are hustling to get ready to support the new devices, anticipating the moment when the CEO walks in with one and demands to read his corporate e-mail on it.

For example, the official policy at ABC Inc. at this point is not to support the iPhone at all. But some exceptions will be made for top executives, said Jeff Plotkin, an engineer and technology liaison in broadcast operations at the New York-based media company.

"For one or two ABC [division] presidents, we'll make the walls move to allow it because we're in the communications business," Plotkin said, noting that the executives will want to examine the iPhone's possible business uses.

Plotkin and other IT managers expect the iPhone to be very alluring to their workers, even though the multifunction device won't support Notes or Windows Outlook e-mail. Instead, it will include a Web client for accessing e-mail.

Potential Nightmare

The iPhone could prove to be a nightmare for some IT departments because it requires an iTunes music directory account for each user. That could potentially put IT in the position of having to provide storage capacity for songs and ensure that copyrights aren't being violated.

"How many enterprises want iTunes running around in the enterprise?" asked Gartner Inc. analyst Ken Dulaney. He noted that "lots" of Gartner clients have been asking questions about business use of the iPhone. IT managers "are scared of this device," he said.

A policy at Marriott International Inc. prohibits employees from using iTunes on any of the company's systems, said Arnaldo Impelizieri, director of hotel technology at the Grande Lakes Orlando resort, which is run by Marriott.

"We're worried about the size of iTunes files, and also who is buying songs or not, and the huge concern about potential copyright infringements," Impelizieri said.

But he added that Marriott faces a dilemma because it will want to support the iPhone for guests at its hotels. "If a customer has one, we'll do our best to support it," he said. "But that will require some sorting out."

Tim Ma, a biomedical engineer at the American Red Cross in Washington who also does some IT planning for the nonprofit organization, said he expects pressure from end users to support the iPhone. But, he said, "it's too early in the game to say if we'd support it. We'd need a proven track record before moving forward."

COURTESY OF APPLE

Apple's iPhone may not be suitable for most business users, but IT managers anticipate that some executives will want the new device.

Ma said he is curious about the iPhone's benefits for a large organization like the Red Cross. For one thing, Apple's device will have a full-screen Web browser, which could give it an advantage over Research In Motion Ltd.'s BlackBerry. Nonetheless, "we have a contract with BlackBerry for a long time," Ma said.

Jack Gold, an analyst at J. Gold Associates LLC, said he doesn't consider this version of the iPhone to be suitable for business users unless they limit their use of the device to functions such as phone calls.

"Everybody assumes that because Apple makes it, the iPhone will be great, but it's hard to make a good phone, let alone [one that can] pass data," Gold said. "Still, executives are going to come back from the store and tell IT to make it work."

Court Blocks Access to Touch-Screen Source Code

BY MARC L. SONGINI

A Florida appeals court last week upheld a lower-court ruling that the source code of software running electronic voting machines can't be independently examined — a setback to efforts to force a new election to fill the state's 13th District U.S. House seat.

Democrat Christine Jennings, who lost last November's election by 369 votes, had been seeking access to the source code to determine whether flawed software in touch-screen e-voting devices caused irregularities.

Jennings has claimed that the iVotronic touch-screen systems made by Omaha-based Elections Systems & Software Inc. caused about 18,000 votes not to be counted in Sarasota County, throwing the race to Republican Vern Buchanan.

The candidate filed a lawsuit shortly after the election to determine whether a technical malfunction caused the undervote. A spokesman for Jennings said last week that no decision has been made on whether to continue the legal effort.

Last week's decision by the First District Court of Appeals upheld Leon County Circuit Court Judge William Gary's ruling in December that the ES&S code couldn't be examined by a third party.

The appeals court ruled that Jennings had not met the "extraordinary burden" of proving that the lower court had "departed from the essential requirements of law."

The result was not surprising to Michael Shamos, a computer science professor at Carnegie Mellon University in Pittsburgh who specializes in e-voting issues.

"It might be helpful to Jennings if she had the tiniest shred of evidence that the software caused the undervote, but she doesn't," he said.

Under Florida law, Jennings would have to prove that a flaw existed to gain access to the source code, Shamos added.

He did call for federal law to be changed to provide public access to the source code of software used in touch-screen machines at any time.

Jennings' spokesman noted that a congressional committee and the U.S. Government Accountability Office are investigating the election.

He said that a three-member legislative task force appointed by the House Committee on Administration is conducting an investigation to determine what caused the undervote.

"They have the ultimate authority in this matter and are moving quicker than the courts ever have," the spokesman said.

He also noted that a preliminary finding from the GAO investigation is slated to be ready by the end of July.

ES&S had no comment on the decision at press time.

Since the disputed election, the Florida state legislature has passed, and Gov. Charlie Crist has signed, legislation banning the use of most touch-screen systems in the state.

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BRIEFS

Sun, Azul Settle Patent Lawsuit

Azul Systems Inc. and Sun Microsystems Inc. have settled a patent infringement lawsuit. Sun filed the lawsuit in May 2006, alleging that Azul violated trade secrets and patent laws. Azul, a maker of high-capacity computing appliances, had hired some former Sun employees, including Stephen DeWitt, who became Azul's CEO in 2002. Officials of both companies declined to disclose terms of the settlement.

Yang Takes Over As CEO at Yahoo

Terry Semel has resigned after six years as Yahoo Inc.'s CEO. He was replaced by the Internet company's co-founder, Jerry Yang. Semel will become nonexecutive chairman and serve as an adviser to the management team. At the same time, Susan Decker, former executive vice president and head of the advertiser and publisher group, was named president of Yahoo.

Dell Admits Error In Blog Threat

A manager at Dell Inc. has acknowledged that the company "blew it" by threatening a blog for posting bargain-hunting tips. The admission came after a Dell attorney demanded that The Consumerist blog remove an entry called "22 Confessions of a Former Dell Sales Manager" that spelled out tips for buying Dell computers. After the site refused to comply, Lionel Menchaca, Dell's manager of digital media, admitted that the legal wrangling had been a mistake.

Verizon Exec Joins Boeing as Its CIO

The Boeing Co. has named John Hinshaw to replace Scott Griffin as CIO. Griffin is retiring after 28 years with the aerospace manufacturer. Hinshaw had previously worked for almost three years as CIO at Verizon Wireless. He will report to John Tracy, senior vice president of engineering, operations and technology.

Users Trade Up to New Data Centers

Move to bigger IT quarters to handle growing demands

BY DAVID STROM AND JOHANNA AMBROSIO

AT THE Regional Justice Information Service in St. Louis, IT has moved up in the world — or out of the basement, at least.

Over Memorial Day weekend, the government organization, known as REJIS, moved its systems and other IT equipment out of a 30-year-old data center that was located in the basement of its headquarters. The systems didn't go far: The new data center is next door to the old one, on the site of a former parking lot.

But the new facility has twice as much floor space and offers improved cooling capabilities, said Eric Gorham, the organization's director of IT. In the old building, "we had 12-inch raised floors that were getting crowded and reducing our airflow," he said. "The new data center has 24-inch floors, so we don't have to worry about hot spots anymore."

REJIS provides application development and other IT services to more than 200 government clients, most of which are county and local criminal justice agencies in the St. Louis area. Its annual revenue totals more than $15 million.

DAVID STROM

REJIS doesn't have to worry about data center hot spots anymore, says IT director Eric Gorham, pictured in front of the organization's new facility.

Gorham said REJIS officials had decided that a basement really isn't a good place for a data center. "We are in an earthquake zone, and our old data center was below grade, not to mention being underneath a five-story building," he said. In addition, the old facility took on water at times, and it didn't have a loading dock, which made deliveries of new computer gear difficult, according to Gorham.

The move to the new data center was scheduled for the start of Memorial Day weekend, to give IT staffers an extra day in case they had problems bringing everything back online. Work began at 2 a.m. that Saturday and was completed in about five hours, although Gorham said that mission-critical data processing services "were really only down for 118 minutes."

REJIS isn't the only organization in the St. Louis area that relocated its IT operations to new quarters this spring. Online trading company Scottrade Inc. recently completed a move of its own, to a new $25 million IT facility located in a suburb of the city.

Technology Overhaul

The new data center is the largest technology investment that Scottrade has made since it was founded in 1980, said CIO Ian Patterson.

"This wasn't as much a move as it was a revamping of the technology," he noted. "We actually redesigned the entire network core and all the infrastructure on the trading floor. It was a green-field approach."

The 34,000-square-foot data center boasts a 10 Gigabit Ethernet backbone, compared with Gigabit Ethernet in the old facility, Patterson said. And the PowerEdge blade servers that support Scottrade's trading floor have been upgraded to Dell Inc.'s so-called ninth-generation models.

The data center also features fully redundant electrical and cooling systems. And like REJIS, Scottrade added a loading dock that includes a large storage area, plus an equipment burn-in room that is located directly between the dock and the data center.

Patterson said that the upgraded facility, which was needed to avoid trading system downtime and latency, should be able to handle Scottrade's processing requirements for the next five years. He added that the old data center would have sufficed for only another two years before the company began running out of space and electrical power.

"Seconds mean dollars to us," he said. "When you look at what's happening in the stock market in terms of volumes, it was clear we needed to do something. When I started, a big day was 110,000 trades. Now it's over 250,000."

Strom is a freelance writer as well as a podcaster, blogger and public speaker. He can be reached at david@strom.com.

HP Aims to Set Example With Internal Data Center Consolidation

LAS VEGAS

HEWLETT-PACKARD'S CIO provided an update on the company's worldwide data center consolidation project last week, saying that the six new IT facilities in which HP plans to centralize its internal systems should all be operational within 60 days.

Three of the six data centers are already up and running, CIO Randall Mott said at the HP Technology Forum & Expo 2007 here. The new facilities – two each in Atlanta, Austin and Houston – will house systems that were previously spread among 85 data centers worldwide. Twelve of the existing data centers have been decommissioned thus far, Mott said.

MOTT: Effort goes beyond "moving stuff to a different place."

But, he noted, "it's not just around moving stuff to a different place." The consolidation initiative is giving HP the chance to refresh the technology it uses internally, move to industry-standard products, eliminate redundant or outdated hardware and software, and improve the energy efficiency of its data centers, he said.

The three-year project is scheduled to be completed late next year. Mott said the company plans to reduce the total number of its servers by 30% but increase its overall processing power by 80%. HP will also double its total storage capacity and triple its network bandwidth while reducing both its storage budget and the cost of running its networks, according to Mott.

In addition, HP is using its project as a showcase for data center consolidation efforts. Teams from the company's IT department and the HP Services unit are working on it together, and HP Services will use the experience it gains to work with clients on similar initiatives.

"We try to make sure it's done right inside HP, and then we can do that for customers," said Tony Redmond, vice president and chief technology officer at the services unit.

HP's IT infrastructure developed in a piecemeal fashion, partly as a result of acquisitions such as its 2002 purchase of Compaq Computer Corp., which had bought Digital Equipment Corp. four years earlier.

Mott said that part of the consolidation project involves software rationalization – going through the thousands of applications at HP to weed out ones that are redundant, outdated or simply useless at this point.

– ROBERT MULLINS, IDG NEWS SERVICE

Blade Vendors Look to Make Thin Clients More PC-Like

HP, ClearCube say upgrades boost the performance of their PC blades

BY PATRICK THIBODEAU
LAS VEGAS

The desktop device that is part of Hewlett-Packard Co.'s PC blade system is about the size of a thick hardcover book and can be centrally managed — a feature that makes it easier to secure than PCs are, HP says.

Moreover, HP this month announced improvements to its Blade PC technology that the vendor claimed will give users a "true desktop experience." Rival ClearCube Technology Inc. followed suit last week, introducing three new end-user devices that it said create a "perfect PC experience" for users of its PC blades.

Sounds great — so why aren't more businesses buying the PC blades offered by HP, ClearCube and other vendors?

According to Framingham, Mass.-based IDC, about 100,000 PC blades were shipped worldwide last year, and it predicts that the number of units shipped will increase to 260,000 this year. That's still infinitesimal compared with the more than 250 million PCs that the research firm expects to ship globally during 2007.

When asked about PC blades, attendees at last week's HP Technology Forum & Expo 2007 said they liked the idea of ditching desktop PCs in favor of blades. But in some cases, they're being held back by technical or cultural issues.

Moving to PC blades is "a very tempting idea," said Jim Becker, IT manager at the Urban Institute in Washington. Becker thinks that using blades on the desktop would reduce the costs associated with provisioning and maintaining PCs. The only potential problem he cited "is a perception issue on the part of end users," who might be reluctant to give up their PCs.

Harold Baker, a senior developer at DirecTV Inc. in El Segundo, Calif., said that if his PC were replaced with a blade system, "it wouldn't make any difference to me." He said his biggest concern would be whether he could store files locally in case the blade system failed, but PC blades equipped with USB ports support that.

Balancing Act

Dominic Costanza, a technical systems analyst at a financial services firm that he asked not be identified, said he sees the issue of moving to blades as a case of balancing the migration cost against the risk of sticking with PCs that are less secure. Security and risk management "are starting to have more weight as time goes on, and maybe the benefits [of switching to blades] will outweigh the cost," Costanza said.

Vendors are trying to reduce end-user resistance to PC blades by adding enhancements such as the ones announced this month by HP and ClearCube.

ClearCube says new desktop devices such as its I9440 I/Port model don't have to be hard-wired to PC blades.

HP said it is upgrading its Blade PC offering with new Athlon 64 chips from Advanced Micro Devices Inc. and incorporating proprietary compression software, called Remote Graphics, that previously was used in its workstations. The compression technology is designed to boost the graphics capabilities of the Blade PC devices to PC-like levels, HP officials said.

Austin-based ClearCube said its new I9400 Series products include technology that eliminates the need to hardwire the desktop end-user devices to PC blades installed in data center server racks. The need for the direct connections had limited the distance that the thin clients could be located from the blade units to no more than 200 meters, according to ClearCube.

Now the two devices can be connected via an IP network, eliminating the distance restriction, said Tom Josefy, ClearCube's director of product management.

To make that possible, the company is equipping both the end-user device and the blade itself with PC-over-IP chips developed by Teradici Corp. The chips use a compression algorithm to help speed the delivery of video streams and other high-bandwidth graphics, Josefy said. ▸

HP Seeks 'Right Balance' on Support Staffing, Exec Says

BY DON TENNANT
LAS VEGAS

Ann Livermore, *executive vice president of Hewlett-Packard Co.'s technology solutions group, spoke with* Computerworld *last week about a range of issues, including concerns voiced by users and HP business partners about the performance of a customer service operation that's increasingly being moved offshore. The interview took place at the HP Technology Forum & Expo 2007. Excerpts follow:*

When I last interviewed you in April 2005, you talked about what then was a new services model, with 20% of your group's 65,000 employees in India, China, Eastern Europe, Costa Rica and the Philippines. Where does that percentage stand now? It's a little higher. One of the things we've found is that we need to get the right balance of work that we do on-site [or] close to the customer, and resources that the customer really doesn't care where they are as long as the expertise and quality are good. We're always trying to balance the geographic distribution and hire where there's good, ample availability of skilled resources.

Expertise and quality are a big issue. Last fall, I spoke with two high-profile HP partners who are OpenVMS consultants. They said the support technicians in places like China and India don't have the required expertise and aren't getting the training they need. What's your response? My view is that customer satisfaction and loyalty are at the heart of everything that HP does and stands for, and that the long-term success of almost any services business, and more broadly [of] almost any corporation, has to do with how well they satisfy customers.

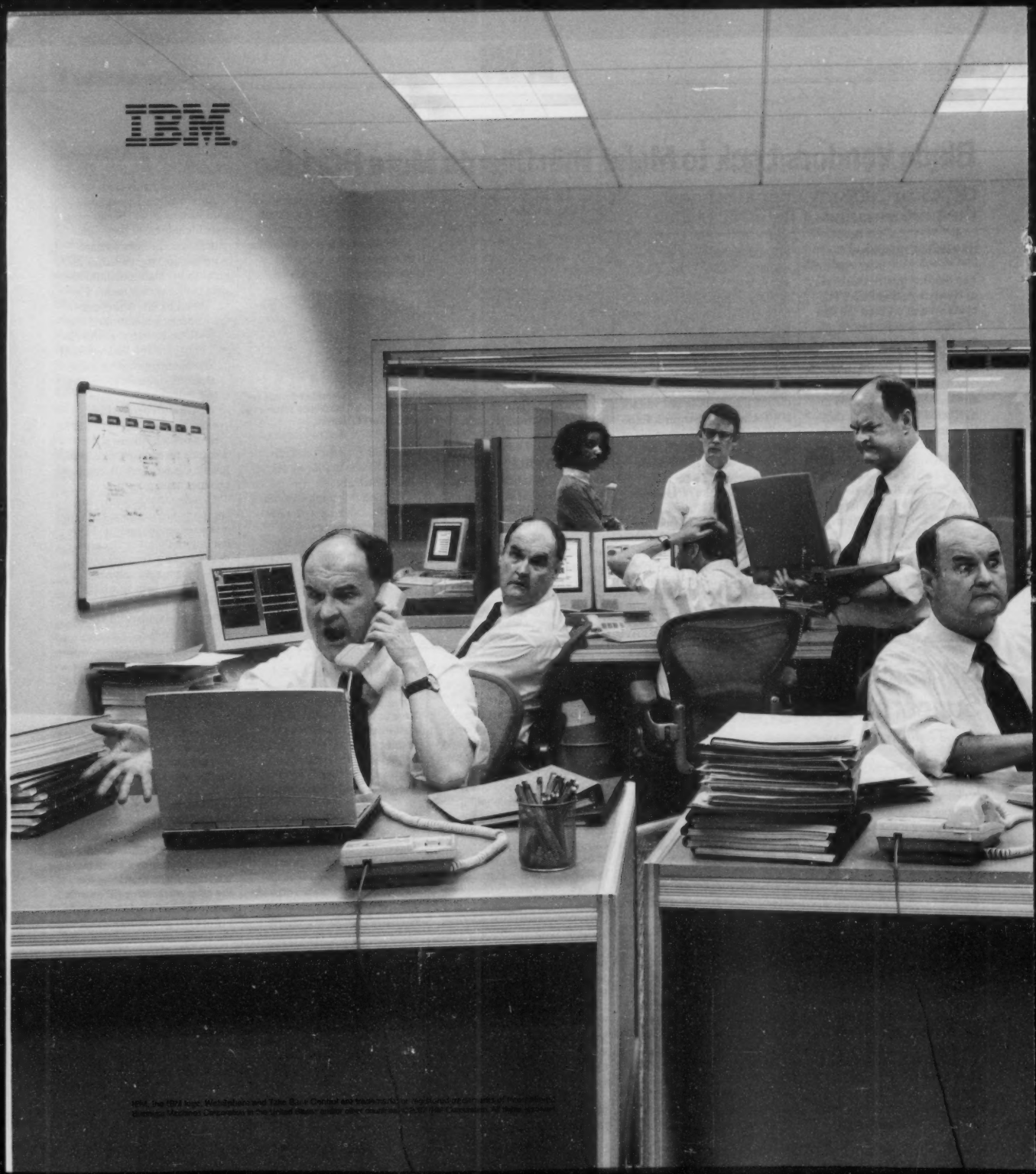
No matter where your resources are, at times you'll have an employee who, for some reason, may not meet the quality or performance standard. What we try to do is take the feedback and address it. We actually followed up on the feedback from those partners to see if we had a training issue specifically with some individuals, or if we had a turnover issue, or what the nature was. In particular for our OpenVMS customers, we are very focused on our installed base. We want our installed base to be happy, and if or when they ever want to migrate, we want them to migrate to another HP platform.

Did you find a systemic problem? No. [But] some people believe you can just look at statistics when you think about customer satisfaction. I think you have to look at every single customer and every single instance. It's not good enough to get 999 right out of 1,000, because even then, you've got one person who wasn't happy.

Also last fall, an HP worker in Nashua, N.H., whose job was among some positions outsourced to Costa Rica complained to me that the replacements were unqualified. Did he have a legitimate gripe, or was it just the natural venting of a victim of offshore outsourcing? One of the things I love about HP employees is that they care about and worry about customer satisfaction. You gave me a partner example before; with employee input, too, to try to make sure if there's anything we can learn from their comments, we follow up on it.

It's hard on any individual if your job ends up moving to another geography. We take very seriously the pain of some of our employees that comes with jobs [changing] locations. So, much like the partner comments, I take every single piece of feedback, [and I believe] that there's something in it you have to look at and act on and learn from.

You're no stranger to high-profile boards of directors, having served on the board at UPS since 1997. Given that experience, would you say it's easy or difficult to understand how something like the mess surrounding HP's media leak probe could have happened? I think the good news about the issue around the HP board was that it didn't have any impact on the operations of the company or how we interacted with our customers. Is it something we feel good about? Well, we certainly regret it; yet at the same time, it's behind us. And the good news is that most of our customers and our employees just stayed focused on the operations of the company, which were going pretty well. ▸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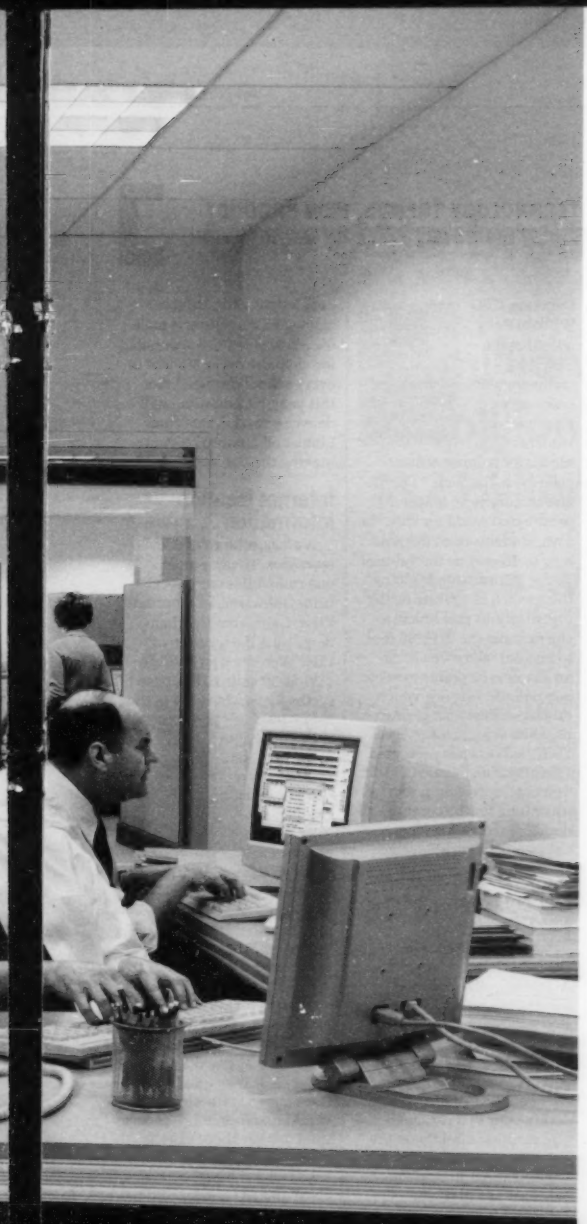

_INFRASTRUCTURE LOG

_DAY 74: This is too much. We're stuck dealing with multiple interfaces and apps. We can't find the relevant info we need. I feel like it takes six of us to do one person's job.

_Six Gils? They better not all have to sign my time sheet.

_DAY 76: I'm taking back control with IBM WebSphere® Portal. It's the fastest and easiest way to integrate everything so we have seamless access to our information. Like Web 2.0 for the business environment, it gives each and every one of us a single, customizable interface.

_Back to one Gil. There's so much less of him to love now.

WebSphere. Portal

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BRIEFS

Dell to Replace Faulty Displays

Responding to customer complaints, Dell Inc. announced plans to replace faulty notebook PC displays. The company said it is offering free replacements of the displays in nine notebook PC models. Users had created a Web site to complain that some LCD screens developed a 1-pixel-wide vertical line. Dell said that some of the affected models use a faulty component that can generate the line over time.

HP Agrees to Buy Security Vendor

Hewlett-Packard Co. has agreed to purchase security vendor SPI Dynamics Inc. for an undisclosed sum. SPI develops software for finding vulnerabilities in Web applications, and for auditing their compliance with corporate governance requirements. HP said SPI and its 140 employees will become part of its technology solutions group.

FTC Warns of Bogus E-mail

The Federal Trade Commission has issued a warning about a bogus e-mail message that contains spyware and targets corporate executives and consumers. The e-mail purports to be an acknowledgment from the FTC of a complaint that the recipient filed with the agency. It includes an attachment containing malicious spyware, the FTC said. Recipients are advised to delete the message.

Enron Unit Exec Gets Prison Term

Kenneth Rice, former CEO of Enron Broadband Services, has been sentenced to 27 months in prison on securities fraud charges. Rice was also ordered by a federal judge to pay $15 million to victims of the fraud at Enron Corp. Rice was charged with making a series of false statements in order to mislead investors and inflate the price of Enron's stock, according to the U.S. Department of Justice.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL

MATTHEW FAULKNER

Test and Grade App Security . . .

. . . with a new service. Whether it's with your own custom code or a packaged application, software security is one of the biggest unknowns. Did programmers mistakenly code in a buffer overflow vulnerability or unintentionally install a rootkit? Did the architect leave out encryption at a key point in a transaction? Who knows? Well, you can, if you subscribe to a new software-security grading service unveiled this week by Veracode Inc. in Burlington, Mass. CEO Matt Moynahan says Veracode's new SecurityReview service will run software through a battery of tests looking for flaws and then give it a three-letter grade, much like Moody's evaluations for investors. He says the A-through-F report cards will look at three distinct security issues — vulnerabilities in the code, the absence or presence of security features, and whether an application contains malware. For example, he says, it's possible to get an AAF rating if software aces the vulnerability and security feature tests but contains a back door. CIOs can submit their internal applications for testing, or they can tell vendors they won't buy their products unless they have them tested. Moynahan says turnaround times for test results will be between 24 and 72 hours. Pricing starts at $5,000 per application.

Grade software on security, advises MOYNAHAN.

Kids get tech boost . . .

. . . from teaching service. Barclay Burns likens using software to using symbol systems such as languages and mathematics. And the best way for students to gain fluency with such systems is to be able to create with them, he says. That's why he co-founded Learning Internet Inc. in Portland, Ore., where he's chairman, and launched Learning.com. There you'll find the EasyTech curriculum, which provides files for use with subjects like science to help teach K-8 students to use software such as spreadsheets and word processors. For math class, for example, they might learn how to make a pie chart in order to better understand fractions. CEO William Kelly adds that the EasyTech technology-literacy service also teaches students techniques for judging content validity on the Web. "The 21st century is no longer a print-based world for kids," he says. Students need to know how to determine the value of online information by doing things such as evaluating the organizations that link to a site or using the WHOIS tool to find out who owns it. As an example he points to *www.martinlutherking.org*, which targets students but is run by white supremacists. EasyTech's success has prompted Learning.com to launch its first core-curriculum service, Aha!Math, for the coming academic year. Pricing for school districts starts at $9 per student per year.

1M Students in Texas using Learning.com, claims Learning Internet.

Schools can get PCs . . .

. . . for as little as $70. That's the bold claim by Stephen A. Dukker, chairman and CEO of NComputing Inc. in Redwood City, Calif. He says that if you install a pair of his X Series PCI cards into a $500 PC, you can get seven users on the machine at once — three per PCI card, and one working directly on the PC. NComputing's L Series can link up to 30 students via Ethernet to a high-end PC. NComputing's technology currently runs Windows, so a school district's licensing deal with Microsoft Corp., as well as the cost of monitors, keyboards and mice, would have to be added to the price per student. Still, Dukker claims, NComputing is making affordable PC use possible for virtually every student in every school district. Later this year, NComputing will deliver a version that runs Linux and Ubuntu software, making the cost even lower.

With the LSeries, 30 students can use one PC, says NComputing.

Internet location information . . .

. . . is a boon to an array of Web operations. Today, numerous companies use a service from Quova Inc. in Mountain View, Calif., that lets them determine the location of their Web site users within a 20-to-50-mile radius based on the known location of the users' Internet service providers. For example, says Gary Jackson, chief operating officer, Major League Baseball uses Quova to help enforce its 50-mile blackout rule for viewing games on MLB.com. And e-commerce sites use Quova's service "as an indicator for suspicious behavior" to help fight online fraud, he says. But with more criminals using bots as proxies to disguise their own locations, online retailers, among others, would like even more-precise information about exactly where site visitors are. So, says Jackson, in Q3, Quova's GeoPoint 6.0 service will be able to offer more geographic data, such as GPS coordinates of nearby Wi-Fi access points, to better pinpoint an end user's location. Also, the company will be able to calculate such things as packet latency to determine how long an HTTP request takes, thereby telling you whether it's a PC in Kansas or Kazakhstan that's connecting to your site. Pricing is based on usage. ▸

JACKSON: Home in on Web visitors' locations.

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In fact, a Fortune 500 company recently installed Webroot products on 30,000 desktops and immediately detected and removed 6,900 spies, 586 Trojans, and 21 keyloggers – on a network protected by three layers of freeware and a well-known antivirus product that supposedly had antispyware capabilities.

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Banks Claim Share of Credit Card Security Costs Is Unfair

Contend breaches are fault of retailers, not card issuers, financial companies

BY BRIAN FONSECA
LAS VEGAS

A PANEL OF financial services and retail executives this month disagreed on which side bears the brunt of the burden to ensure compliance with the Payment Card Industry (PCI) Data Security Standard.

Executives from JPMorgan Chase & Co. and First Horizon National Corp. told an audience at Symantec Corp.'s Vision user conference here that high-profile data breaches at retailers like The TJX Companies Inc. are not originating from their side of the fence — yet they must spend significant sums to make sure such incidents don't happen.

The TJX incident "was not a JPMorgan [data breach]; it wasn't at First Horizon or Citigroup. It was at a merchant. And yet all the plans to remediate that have been with the banks," said Christopher Leach, senior vice president and chief information security officer at Memphis-based First Horizon.

Framingham, Mass.-based TJX disclosed early this year that more than 45 million credit and debit card numbers were stolen from two of its IT systems over an 18-month period.

An AT&T Inc. executive, on the other hand, contended that banks have so far done little to share in the burden of ensuring credit and debit card security compared with businesses that accept such payments.

The PCI standards were created by five credit card companies — Visa International Inc., MasterCard International Inc., American Express Co., Discover Financial Services LLC and JCB Co. — to protect credit card data before, during and after transactions.

> [The TJX incident] was at a merchant. And yet all the plans to remediate that have been with the banks.
>
>
>
> , SENIOR VICE PRESIDENT AND CHIEF INFORMATION SECURITY OFFICER, FIRST HORIZON NATIONAL CORP

First Horizon, which operates in 43 states and claims $5 billion in annual revenue, is currently going through a costly new round of PCI certification efforts — or, as Leach put it, "trying to build that airplane as we build the runway."

"We've discovered that PCI keeps changing," Leach said. "We went down the path to be certified at one point and did a great deal of due diligence only to find out some of the requirements would change. One Visa analyst would say one thing, and another Visa analyst would say something very contradictory."

Brian Glowacki, vice president and lead architect for global storage technology at JPMorgan in New York, agreed that banks are bearing an unfair security burden compared with merchants.

Vanessa Pegueros, director of compliance services at AT&T, contended that banks are "thumbing their noses at the PCI regulation, so we are paying the price."

"We were doing a good job — maybe not as fast as some would like, but we were on a plan and trying to meet the [PCI] requirements," Pegueros said. "But [Visa is] trying to take a hard-line approach, and we're caught in the middle. Now we have to adjust our plans."

Gartner Inc. analyst Avivah Litan agreed that banks are not yet taking adequate measures to comply with the PCI standards.

"There has not been a lot of enforcement at the bank level," she said. "All the enforcement scheduled has been on the processing and retailer side, so it has been unfair, frankly."

Litan said retailers are upset because they believe that they are being held to a higher standard than banks in securing their systems.

Bob Russo, general manager of the PCI Security Standards Council in Wakefield, Mass., said that both sides should work together to ensure that the cards are secure.

"This should not be a blame game," he said. "The bottom line is, everyone who touches consumer payment card data has a responsibility to secure it."

Corrections

The last name of Cathy Sells, director of IT operations for Fairfax County Public Schools in Virginia, was misspelled in the "Minds Wide Open" story in last week's 100 Best Places to Work in IT special report. Her name was also spelled incorrectly in the editorial in that issue.

In addition, the title of Patrick McInnis was listed incorrectly in a story about Quicken Loans, which finished No. 1 in the Best Places rankings. McInnis is president and chief learning officer.

Also, because of incorrect information included in Comerica Bank's company survey, a story on corporate perks ("If You Worked Here, You'd Be Happy Now") stated that the bank offers 12 weeks of paternity leave at full pay. Comerica has since clarified that it offers standard paternity leave according to the Family and Medical Leave Act.

IBM Adds Tools to Extend Web 2.0 to Business World

BY HEATHER HAVENSTEIN

IBM last week launched an effort to extend Web 2.0 to the corporate world by unveiling team collaboration, social computing and Web mashup development tools.

The new Quickr 8, Lotus Connections and Info 2.0 products are part of IBM's new "Web 2.0 Goes to Work" initiative, which aims to expand business use of popular consumer technologies like blogs, wikis and social networks, said Rod Smith, vice president of emerging technologies.

Web 2.0 technology can help workers more easily brainstorm and collaborate with one another and with corporate partners and customers, explained Smith.

John Tincher, global Lotus Notes administrator at Flint Group North America, said that his firm has made limited use of Web 2.0 technologies to date and that he doubts they will become business-critical in the near term. "Having the social networking at some point will be wonderful, but I don't see it taking root at least for another couple of years in our environment," he said.

Tincher said he uses a blog to list his daily schedule for his bosses to view and wiki technology to make Notes administration resources available to colleagues.

Companywide, however, the Plymouth, Mich.-based manufacturer of printing inks, plates and pigments is just now delving into the use of instant messaging and relies on e-mail as its primary communications tool, he added.

Vijay Sonty, CIO for Broward County Public Schools in Sunrise, Fla., said that the tools won't likely benefit the K-12 education sector until IBM can come up with specific features needed there.

For example, the Web 2.0 tools should support training programs for the district's 15,000 teachers and add the security capabilities required to receive federal monies, he said.

Going Corporate

Sonty, who was a member of the IBM Lotus customer board of advisers, said that he does expect other businesses to more easily take advantage of Web 2.0's ability to blend content and collaboration.

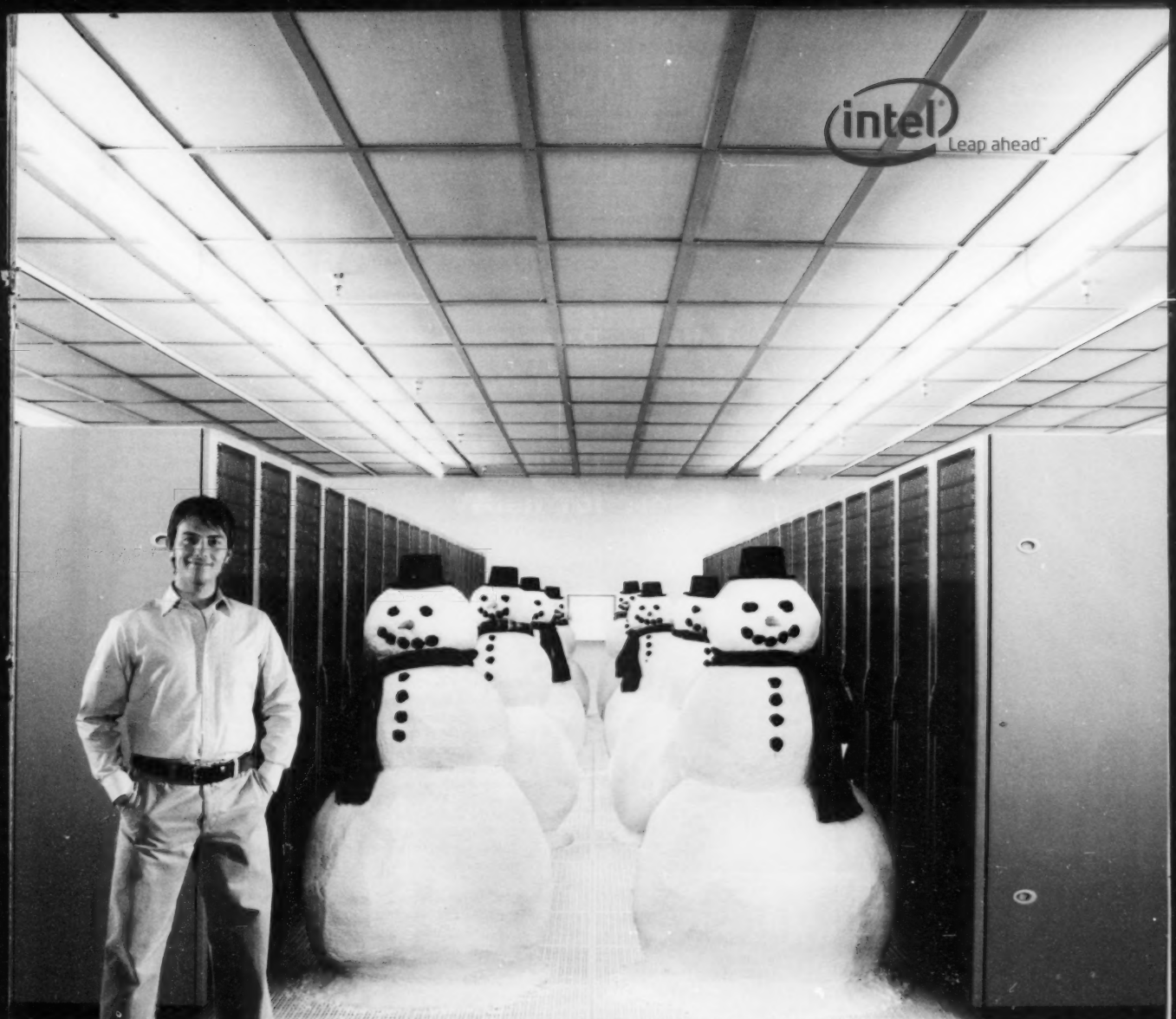
The Quickr 8 team collaboration tool helps companies use blogs, wikis and team space templates to share business documents and access libraries through plug-ins, IBM said.

The Lotus Connections social networking tool set includes Web 2.0 components like bookmarking, IBM said.

It described Info 2.0 as a suite of tools for customizing and linking Web and corporate data into mashups.

Oliver Young, an analyst at Forrester Research Inc., said that the Quickr and Connections tools will be welcomed in companies where employees bring Web 2.0 technologies into work to "collaborate in ways they can at home."

However, he cautioned that calculating a return on investment will be difficult. "There are only rare cases where you can say, 'This is how much time it saved,' or, 'This is exactly how many systems we were able to sunset.' "



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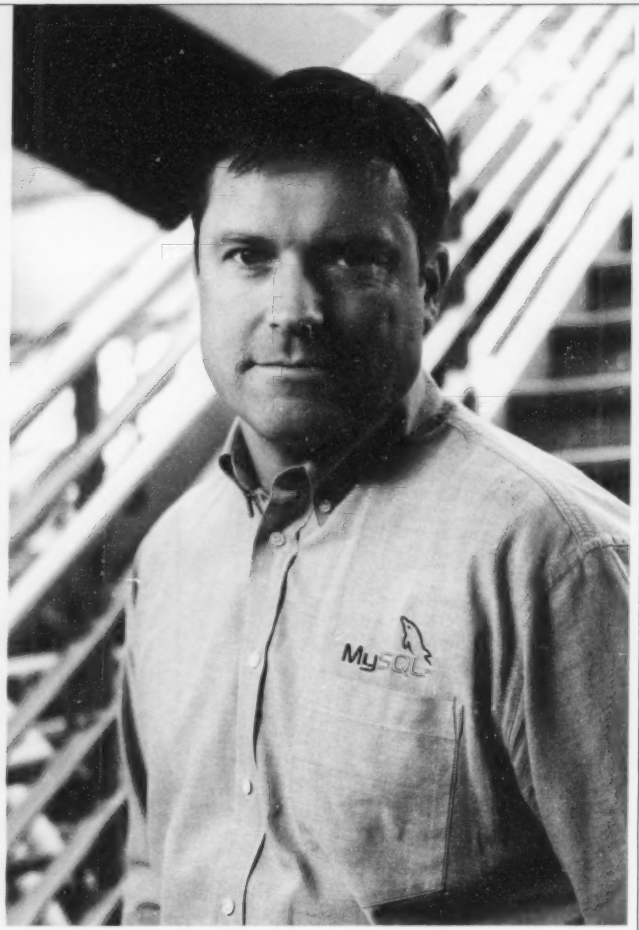

Mårten Mickos

MySQL's CEO calls out **Oracle**, sets **Wall Street** straight and explains what **open source** is really all about.

THE GRILL

Mårten Mickos is living proof that you can take 12 years to graduate from college with an esoteric degree (technical physics) and still become a CEO. Not that he was slacking: Mickos started his first software integration company while in college. He has also sold software in Russia, launched a Linux database for Solid Information Technology Inc., run a telecommunications software firm, and headed up an online betting site that went bust during the dot-com crash. Mickos was recruited to lead open-source database provider MySQL AB in 2001 by chief technology officer and co-founder Michael "Monty" Widenius, a college classmate. Since then, the MySQL database has become one of the most popular open-source technologies around, used by many of the biggest Web 2.0 sites. And despite openly admitting that it gets paid by only one of every thousand users, MySQL is thriving, to the point that the company is planning an initial public offering.

Do you think the Web 2.0 market is a bubble? It's not like the dot-com bubble. Yes, there is more VC money and more entrepreneurs than is sustainable by the market. But that's how it should be, because then you get this Darwinian system of the fittest surviving. We try to support every one of our customers to be supersuccessful. But statistically, we know that not all of them will be.

So the enterprise support subscription you recently began selling – is that your hedge against a potential bubble implosion? There won't be an implosion. There will be many companies coming and going. There are bubble companies that will ultimately just disappear. They usually use us free of charge. Once they start paying, it is because their business model is working. So YouTube is a paying customer, Second Life is a paying customer, CraigsList is a paying customer. Nobody can predict where they will ultimately go, but for now they are very robust businesses.

You openly acknowledge that only one out of a thousand MySQL users ever pays. Would you ever consider going partially closed-source and making some code and products proprietary? We've had that debate many times. I think we might win a few new customers, but we would lose 2 million users. We're not ready for that kind of compromise. We also look at other companies who have built closed-source products on top of open-source ones. They don't seem successful.

I think we are well protected against predatory behavior by our competitors. When you download MySQL, it's just GPL code. But the code is owned by us. We have the copyright, we determine what goes into it, we put in the bug fixes. There's nobody else with that core skill.

Secondly, an important part of our paid subscription can't be copied. Our technical support is not copyable by others. Our monitoring services are not copyable.

When people ask if Oracle will start supporting MySQL, I say I would welcome it. I actually told them once, "Why don't you launch Unbreakable MySQL? You can announce it at our user conference, you can buy a platinum sponsorship, I'll mention you in my keynote." Because I would love to compete with Oracle on our own turf. I would get an endorsement free of charge, and I would get a competitive situation that I easily could win.

I'm not only hoping Oracle will do it; I'm hoping IBM will. I'm hoping Microsoft will do it. What better endorsement is there? And when you have faith in your business model and your core competencies, why fear those things?

Dossier

Name: Mårten Mickos

Title: CEO

Organization: MySQL AB

Location: Silicon Valley and Sweden

Alumni loyalty: "My parents, three siblings and I all have master's in engineering from Helsinki University of Technology."

Sprechen vous Ruski? "By my standard, I speak four languages: Swedish, Finnish, English and German. But if I stretch it a bit, I can also easily talk with Norwegians and Danes. And I know a little French and Russian, too."

Sports fan? "I'm not interested in watching sports. I don't expect athletes to watch me when I work, so why would I watch them while they work?"

Young geek? "I had an interest in mathematics and mathematical philosophy, but I didn't care about computers."

Does your growth also depend on invading their turf? Are you pulling users away from Oracle, DB2, SQL Server? Not that much. If you look at our customer list, most are new companies, growing companies, technology companies, new media companies. Sure, they could have gone with Oracle, Microsoft or IBM, but they said, "This is a new thing; we want the best product. We'll go with MySQL." Those guys never considered anything else. Facebook: Did they ever consider something else? No. It was absolutely obvious their needs were met with the LAMP stack [Linux, the Apache Web server, MySQL and the PHP programming language].

But investors are going to want to know, is there diversification? You have a lot of media companies, but are you getting auto manufacturers, industrial companies? If that's what they think we have to do, then they are just plain wrong. Some of the most successful businesses today operate in the modern online world, and we do, too. We will welcome the manufacturing companies and all of those once they take a step into the Web architecture. But if they don't, we won't bother going there.

You seem to be a very grounded businessman who just happens to be in the open-

Continued on page 18

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U.S. May Require Online Registration for Visitors

PARIS

EUROPEANS WHO visit the U.S. would be required to fill out an online questionnaire two days before entering the country, under a plan the U.S. Department of Homeland Security may send to Congress for approval.

Hugo Teufel III, chief privacy officer at the DHS, said at a press conference here this month that agency officials have been discussing the idea for about a month. He would not disclose a schedule for implementing such a program.

The proposal will likely increase tensions between the U.S. and Europe, which are already involved in a heated debate over U.S. demands for data about air passengers traveling from Europe to the U.S.

Though Teufel offered few details on the latest proposal, he did note that the DHS will prepare a "privacy impact assessment" covering issues such as how data is used, who can access it and how long it will be retained.

■ JAMES NICCOLAI, IDG NEWS SERVICE

GLOBAL FACT

$46B

Projected 2010 spending by small and midsize Chinese businesses on IT infrastructure systems, up from $21 billion in 2005.

SOURCE: AMI PARTNERS INC., NEW YORK

Wipro Touts Green PCs

BANGALORE, INDIA

WIPRO LTD. has introduced a line of PCs that it says are compliant with the EU's Restriction of Hazardous Substances directive.

Wipro, based here, is the first Indian computer maker to offer RoHS-compliant products, said Ramapati Kumar, team leader for toxics at the Bangalore office of the international environmental group Greenpeace.

The RoHS directive, which the European Union adopted in 2003, went into effect in July 2006. It restricts the use of six hazardous materials in the manufacture of various types of electronic equipment.

Wipro's entire PC line will be RoHS-compliant by the end of this year, said Ashutosh Vaidya, vice president of Wipro's personal computing division. The division, which primarily targets corporate customers, sold about 170,000 PCs last year and expects sales of 250,000 units in the fiscal year ending next March, Vaidya said.

■ JOHN RIBEIRO, IDG NEWS SERVICE

Barclays Sells Stake In Indian Outsourcing Firm

MUMBAI, INDIA

BARCLAYS BANK PLC and India's Housing Development Finance Corp. (HDFC) have announced plans to sell Intelenet Global Services Pvt., a jointly owned business process outsourcing services provider, to SKR BPO Services Ltd.

SKR BPO Services is jointly owned by the management of Intelenet and Blackstone GVP Capital Partners Mauritius V-B Ltd., a unit of New York-based Blackstone Capital Partners.

Terms of the deal for Mumbai-based Intelenet, which has a workforce of about 17,000 and assets of $107 million (U.S.), were not disclosed.

London-based Barclays said it plans to create a wholly owned subsidiary in India for business process outsourcing projects. "Our sourcing operations have reached a scale where we would like full control over the operations," a Barclays spokeswoman said last week.

Barclays acquired a 50% stake in Intelenet from Mumbai-based HDFC in 2004; HDFC retained the balance.

■ JOHN RIBEIRO, IDG NEWS SERVICE

Compiled by Mike Bucken.

Briefly Noted

Google Inc. has announced plans to open a research and development center in China, stepping up its effort to boost its search business there. Marsha Wang, a China-based spokeswoman for Google, confirmed plans for an R&D lab but declined to say how many people it will hire or when it will open.

■ STEVEN SCHWANKERT, IDG NEWS SERVICE

U.K. National Health Service IT Director Richard Granger has announced plans to quit his post by the end of this year. As IT director, Granger oversees the controversial £12.4 billion ($24 billion U.S.) National Programme for IT project. Granger said he is leaving to pursue a job "in the private sector."

■ TASH SHIFRIN, COMPUTERWORLD U.K.

Microsoft Corp. has agreed to buy 15 million newly issued shares in Sichuan Changhong Electric Co., a Mianyang, China-based consumer electronics maker, for 94.1 million renminbi ($12.3 million U.S.). Terms of the deal require that Microsoft hold the Changhong shares for at least three years.

■ SUMNER LEMON, IDG NEWS SERVICE

Continued from page 16

source business. Do you get pressure from MySQL fans who want you to be more . . . "lefty" or something? I am very passionate about open source. And I do believe that it is a superior method. But at the same time, I must be pragmatic. So when they say being dogmatic is very important for the Free Software Foundation — well, they should be. That's what we respect them for. But running a business is not about dogma. We are not judgmental about our customers or partners. We are happy to partner with closed-source companies. We believe that in the long run, open source will win anyhow.

There's nothing leftist about open source. This is a common view in America that is incorrect. Sharing doesn't make you a leftist. I mean, who are the most sharing people in the world, by charitable contributions? It is Americans.

Our customers are not against us making money; it's that they're for freedom. So make as much money as you can, but don't touch the freedom. That's what they're saying.

"I would love to compete with Oracle on our own turf. I would get an endorsement free of charge, and I would get a competitive situation that I easily could win.

MÅRTEN MICKOS, CEO, MYSQL AB

THE GRILL

Some analysts cite MySQL as proof that most commercial open-source companies don't rely on outside code contributions – that it's all a myth. I don't know why people are always glorifying lines of source code. This is a big fallacy in the industry. We are trying to get more outside contributions to the kernel. But building a successful software product is so much more. Source code represents just 10% of the effort. We need contributions anywhere in the value chain. We are happy to produce all the code in the kernel if somebody else writes all the manuals or documents the code or fixes the bugs. The value of that is as big, if not bigger.

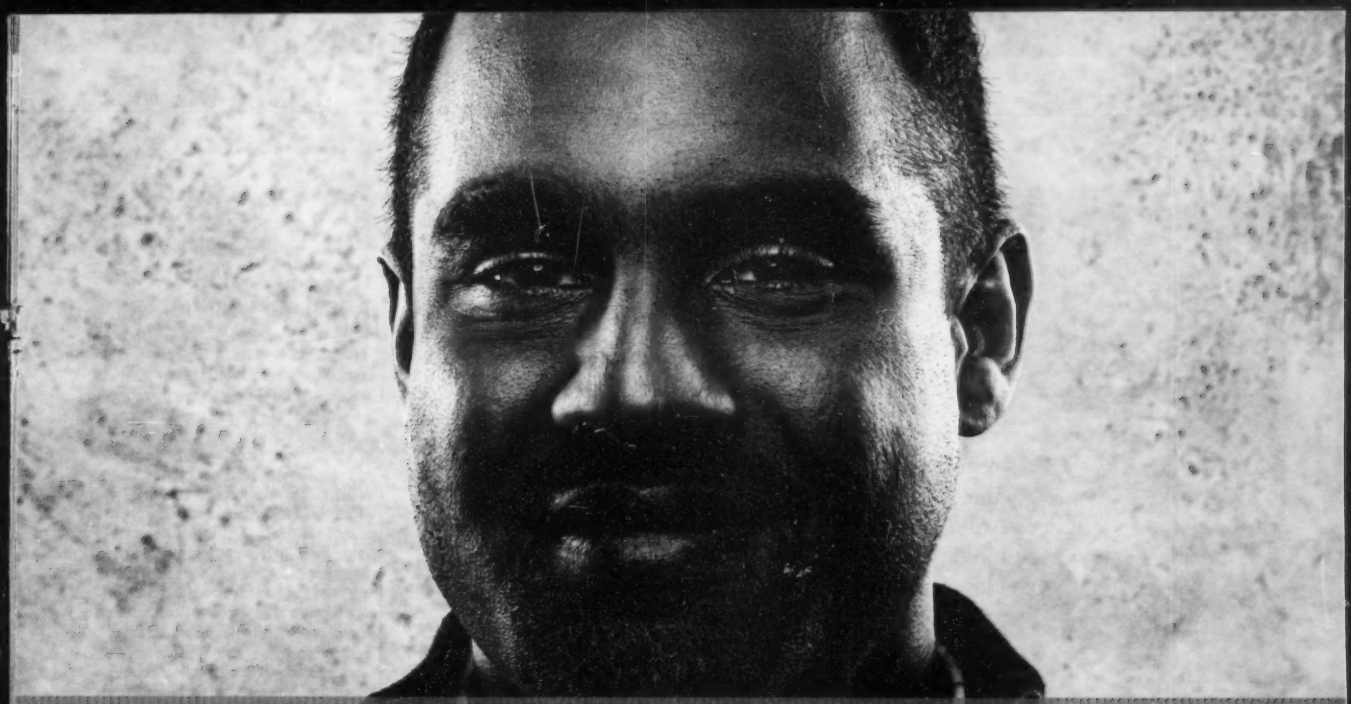
Do you actually pay outsiders for contributions or bug fixes? We've done so many times. It can range from a few thousand dollars to hundreds of thousands of dollars. Sometimes this is to a single brilliant programmer, not a company. We want people to make money in partnership with us. So why wouldn't we pay them?

If I could choose between starting a new project within a company that costs me tens of thousands of dollars or buying the same thing for a hundred thousand, I'd probably buy it, if I knew it was super-duper good. That's better than running the risk of a delayed project with buggy code and slow performance.

What's changed at MySQL as you get ready for an IPO? Of course, there are more procedures and more standards. Our engineers are saying, "Hey, this is becoming more corporate!" But that's the way it goes. What's the alternative? That we don't grow? We have 350 employees now. I think we'll double that in a year or two. I think we all accept what's happening, but we'll still look back and say, "Do you remember in 2002, when the whole company got together and we made those decisions together?"

Do you envision yourself as CEO after the IPO? Hmm. I don't think it is productive to think too much about this. I'll serve as CEO as long as I can. Every morning that I wake up and I still haven't been fired, I think it's a victory.

– INTERVIEW BY ERIC LAI



I SAID GETTING LINUX AND WINDOWS TO WORK TOGETHER IS THE RIGHT THING TO DO AND THEY SAID YOU'RE SO RIGHT.

INTEROP ABILITY

KNOWLEDGE THE COLLABORATION ROADMAP

It's the ability to have Microsoft Windows Server and SUSE Linux Enterprise Server from Novell work together. And the ability to integrate both more easily than you imagined. It's Microsoft and Novell working together to help you reduce cost and complexity with new solutions for virtualization, directory integration, systems management, and office document translators—each with clearly defined intellectual property rights. So you can increase performance, savings and simplicity and build your data center without compromise.

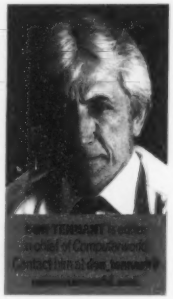
Download the collaboration roadmap at **www.moreinterop.com**

Novell Microsoft

DON TENNANT

The Dutiful No. 2

A COUPLE OF DAYS before I left for Las Vegas to attend last week's HP Technology Forum, I was at the gym making small talk about Hewlett-Packard with a guy who's a regular at the gym and who works for HP's storage business. Just out of curiosity, I asked what he thought of Ann Livermore, executive vice president of HP's technology solutions group, because I was slated to interview her at the conference.



His response surprised me. He groaned and said something about it being a prudent career move for him to withhold his comments. I let it go, but a few moments later, he brought it up again.

"She came from the services side, right?" he asked.

"Right," I responded.

"That's why I had the reaction I did," he said, and he went on to express his frustration and disappointment with HP's services performance. If that's at all attributable to Livermore, he reasoned, it was difficult to give her much of a thumbs-up.

I was very much aware of the concerns about the quality of HP's services and support that have arisen as those operations have increasingly shifted offshore. I've received enough letters and read enough online comments from disenchanted customers, partners and even employees to know that there's a serious issue here. So it headed my list of topics to discuss with Livermore when I interviewed her last Monday (see Q&A, page 9).

Citing examples of what appears to be the primary concern — that HP's offshore support technicians lack the expertise needed for the job and aren't getting the training they need to change that — I asked Livermore for her response. She launched into the standard spiel about how customer satisfaction is at the heart of everything HP does.

"What I feel very strongly about is when we get feedback from partners or customers that critique us in any way, we've got to act really fast to get to the source of it and figure out whether there's a systemic problem or a problem with the performance of an individual," she said. "Either way, we have to address it."

"Have you found a systemic problem?" I asked.

"No," she responded. And she picked up where she left off with the customer satisfaction spiel.

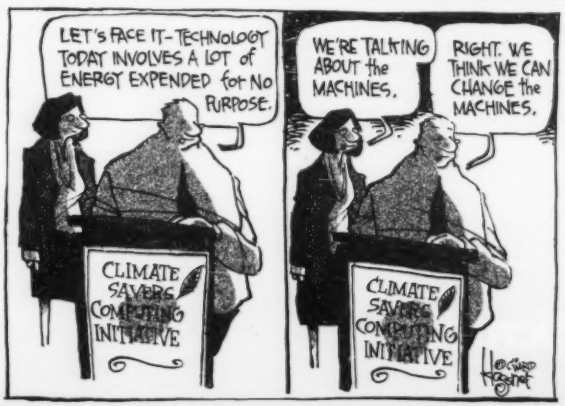
Having a high regard for Livermore like I do, I was disappointed with her response. Of *course* there's a systemic problem. So it's either the case that Livermore is in denial and doesn't recognize the problem, or she's toeing a company line that sees downplaying the problem as the optimal strategy.

When you consider Livermore's reputation as a brilliant, influential businesswoman (in 2006, she ranked 14th on *Fortune*'s list of the 50 Most Powerful Women, and 19th on *Forbes*' list of the 100 Most Powerful Women), it's hard to fathom that she would ever allow herself to slip into denial mode. And when you consider that she has an equally strong reputation as the consummate team player (she's remained the dutiful No. 2 despite having had the CEO nod withheld twice since Lew Platt stepped down in 1999), it isn't surprising that she would feel compelled to support the game plan that's been drawn, explicitly or implicitly, by CEO Mark Hurd. That's what a dutiful No. 2 does.

But it's not the station that someone of Ann Livermore's caliber should have. When I asked her what the odds are that she will have served as a CEO before she retires, she gave me her standard response: "I don't have a career ambition that I have to be CEO to have felt satisfied with what I achieve."

Maybe not. But this industry would be better served if she did.

Don Tennant


LET'S FACE IT- TECHNOLOGY TODAY INVOLVES A LOT of ENERGY EXPENDED for NO PURPOSE.
WE'RE TALKING ABOUT the MACHINES.
RIGHT. WE THINK WE CAN CHANGE the MACHINES.
CLIMATE SAVERS COMPUTING INITIATIVE
CLIMATE SAVERS COMPUTING INITIATIVE

READERS' LETTERS

How Code, Market Share Affect OS Security

THE TITLE of the column "Security Isn't Just Avoiding Microsoft" [Opinion, May 7] is somewhat true but far from being *the* answer when selecting a platform for your corporation.

C variants like C++ and C# are commonly used to develop Windows and applications for Windows. Legacy programming languages such as Cobol, however, provide strict enforcement of data field formats, movement and data-typing in results. An alphanumeric move from one field to another would always truncate or space-fill, respectively, the receiving field if it was a different lengtn. Other "quirks" were also defined by the language, which defined the results of operations, or at least specified that the results may be undefined. The languages and tools commonly used to develop Windows and Web applications do not incorporate many of the features provided by mainframe languages. When combined with the possibility of overlooking the edit/validate data entry step, it is no wonder applications worked fine with correct data but failed when used with invalid or improper data.

While optional libraries have been produced that add many of the legacy languages' data movement and data-typing features and thereby reduce some of the buffer overflows and similar vulnerabilities, when combined with additional programmed validation coding, a problem still exists in the Windows environment: It is designed to function like a C++ program that implements "operator overloading." Difficult enough to design and implement in a single application, it's impossible to control in an execution environment where there is a mix of languages, compilers, programs, scripts, functions and DLLs developed by third parties. Though your application might use the new libraries and coding to protect itself from stack overflows, what of the other programs/scripts/functions/DLLs? The Registry may control the dynamic invoking of "type to function/application/program/DLL/etc.," and any application could replace another DLL or function. What guarantee is there that any other application, without those protections, hasn't preempted the defaults you developed with?

I find it amazing that there are so few application or security problems with Windows.

Gary Drummond
Olathe, Kan.

THE AUTHOR is right: An 80% market share is no good, not for Microsoft, Apple, Linux or any operating system. The "winning" in the operating system war is where things went wrong – which is, by the way, where the author goes wrong, too: He suggests someone should "win."

Valentijn Sessink
Consultant, Open Office,
Amsterdam, v.sessink@openoffice.nl

Computerworld Gets a New Look and Size

PREVIEW: Newsweekly will change to magazine format on July 9, starting with our special 40th anniversary issue.

THE NEXT ISSUE of *Computerworld* that you hold in your hands will be quite different. Starting July 9, *Computerworld* will switch from a tabloid-size publication to a magazine-size format, like *Time*'s and *Newsweek*'s.

The July 9 issue will be extraordinary for another reason: It will have a special report commemorating *Computerworld*'s 40th anniversary. The special edition will look back at the IT flops and successes of the past four decades, in addition to looking forward to the next generation of IT leaders.

The subsequent issue, July 16, will be more typical of the new *Computerworld* magazine.

Editor in Chief Don Tennant announced the change to a magazine format in his April 2 editorial. "It was driven, more than anything else, by financial considerations," Tennant explained. "The fact is, it costs more — a lot more — to produce a tabloid-size publication than it does to produce a magazine-size publication, because of the differences in printing, paper and postage expenses. Like just about every other publication around, we've had to cut print costs because advertisers are shifting more and more of their ad dollars from print to online. It's a simple fact of publishing life."

The business decision required a fast-paced redesign of the publication that was led by Stephanie Faucher, *Computerworld*'s award-winning design director, and Mitch Betts, executive editor.

The redesign retains all of the signature departments — and the same fonts — found in today's *Computerworld*, so that even in a different format, it "still looks like *Computerworld*, and yet it also looks fresh," Tennant said. Faucher said the new design is intended to be clean, uncluttered and sophisticated.

The redesign also reflects changes in IT reader habits. These days, readers are likely to get their breaking news from *Computerworld.com* and other Web sites, so the emphasis in the weekly magazine will be on analyzing what that news means to enterprise IT managers and executives. Plus, some articles will have boxes (with distinctive yellow bars) that point readers to additional information or commentary at *Computerworld.com*.

The news section will have two parts: a News Digest summarizing the week's most important corporate IT news; and longer, more analytical stories that are unique to *Computerworld*. The redesign will also showcase the publication's newest addition: The Grill, a two-page interview with an IT luminary or interesting personality.

The features section will include in-depth articles, Security Manager's Journal and other rotating departments, such as QuickStudy, Future Watch and IT Mentor.

Readers will find a few familiar elements in new locations. Tennant's editorial column will be near the front of the magazine, for example, and a weekly installment of Career Watch will be near the back.

WHAT'S CHANGING

- The magazine size debuts July 9.
- The cover will highlight one main story, plus an index of the top stories inside.
- The editor in chief's column and readers' letters will be near the front.
- The News Digest will summarize the week's news.
- Career Watch will appear every week.

WHAT'S NOT

- Our editorial mission, quality and audience focus
- Our unique news analysis, feature articles, Knowledge Centers and special reports
- The Grill interview and the On the Mark column
- Feature departments such as Security Manager's Journal, QuickStudy, Future Watch and IT Mentor
- Shark Tank and Frankly Speaking

Faucher said the pacing of the article pages is different for magazines than it is for newspapers. "With magazines, you start with appetizers, then you get to the meatier articles, and then wrap up with the dessert," she said. In this case, the "dessert" on the back pages will continue to be Shark Tank — a compilation of true tales of IT woe — and Frankly Speaking, by award-winning columnist Frank Hayes.

This index will identify news analysis articles, Q&As and opinion columns inside the magazine.
In each issue, we'll offer a quick read of the week's top corporate IT news.
Articles will have pointers to online resources at Computerworld.com.
News Digest
TJX Data Breach Gets Even Worse
COMPUTERWORLD
Inside
Home Office Lockdown
Most companies still lack policies for virtual offices. Here are some ways to allay the huge data risks they pose.

Squirrels don't remember where they hide their nuts.

They're not looking in the right places for what they need.
But you can. With proven information management software from SAS.

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STRATEGIES & TACTICS

Inside 06.25.07

Saving Lives Via Video. Sutter Health's eICU system has saved hundreds of lives and cut costs by millions of dollars. PAGE 28

IT Handoff at Atlanta's airport PAGE 30

Green Buildings PAGE 31

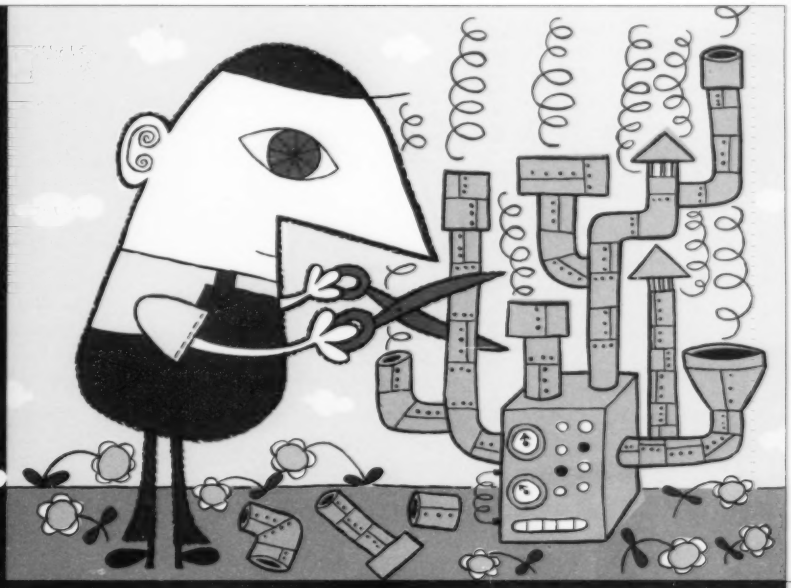
Simple SANs PAGE 32

Security Manager's Journal PAGE 34

Opinion: Naomi Karten PAGE 36

By Robert L. Mitchell

SEVEN STEPS TO A Green Data Center



These tips will help you minimize power consumption, heat, waste and chaos.

HOW GREEN is your data center? If you don't care now, you will soon. Most data center managers haven't noticed the steady increase in electricity costs, since in most cases they don't see those bills. But they do see the symptoms of surging power demands.

High-density servers are creating hot spots in data centers that have surpassed 30 kilowatts per rack for some high-end systems. As a result, some data center managers are finding that they can't get enough power distributed out to those racks on the floor. Others are finding that they've maxed out the power utility's ability to deliver additional capacity to their location.

Ken Brill, founder and executive director of The Uptime Institute Inc., sees the beginnings of a potential crisis. "The benefits of [Moore's Law] are eroding as the costs of data centers rise dramatically," he says. Increasing demand for power is the culprit, driven by both higher power densities and strong growth in the number of servers in use. Server electricity consumption in data centers has quietly doubled in the past five years, according to study sponsored by Advanced Micro Devices Inc. that was conducted by John Koomey, a consulting professor at Stanford University and a staff scientist at Lawrence Berkeley National Laboratory.

Server performance is improving faster than energy efficiency is advancing. "If we're going to get energy efficiency rising faster than the rate of performance increase, we're going to have to do something radically different than what we're doing today," Brill says.

Fortunately, there are many steps that data center managers can take to start reducing power consumption in existing data centers without making a huge investment — or sacrificing performance or availability.

1. Consolidate, consolidate, consolidate.

Consolidating servers is a good place to start. In many data centers, "between 10% and 30% of servers are dead and could be turned off," Brill says.

Removing one physical server from service saves $560 annually in electricity costs, assuming a cost of 8 cents per kilowatt-hour, says Bogomio Balkansky, director of product marketing for Virtual Infrastructure 3 at VMware Inc. in Palo Alto, Calif.

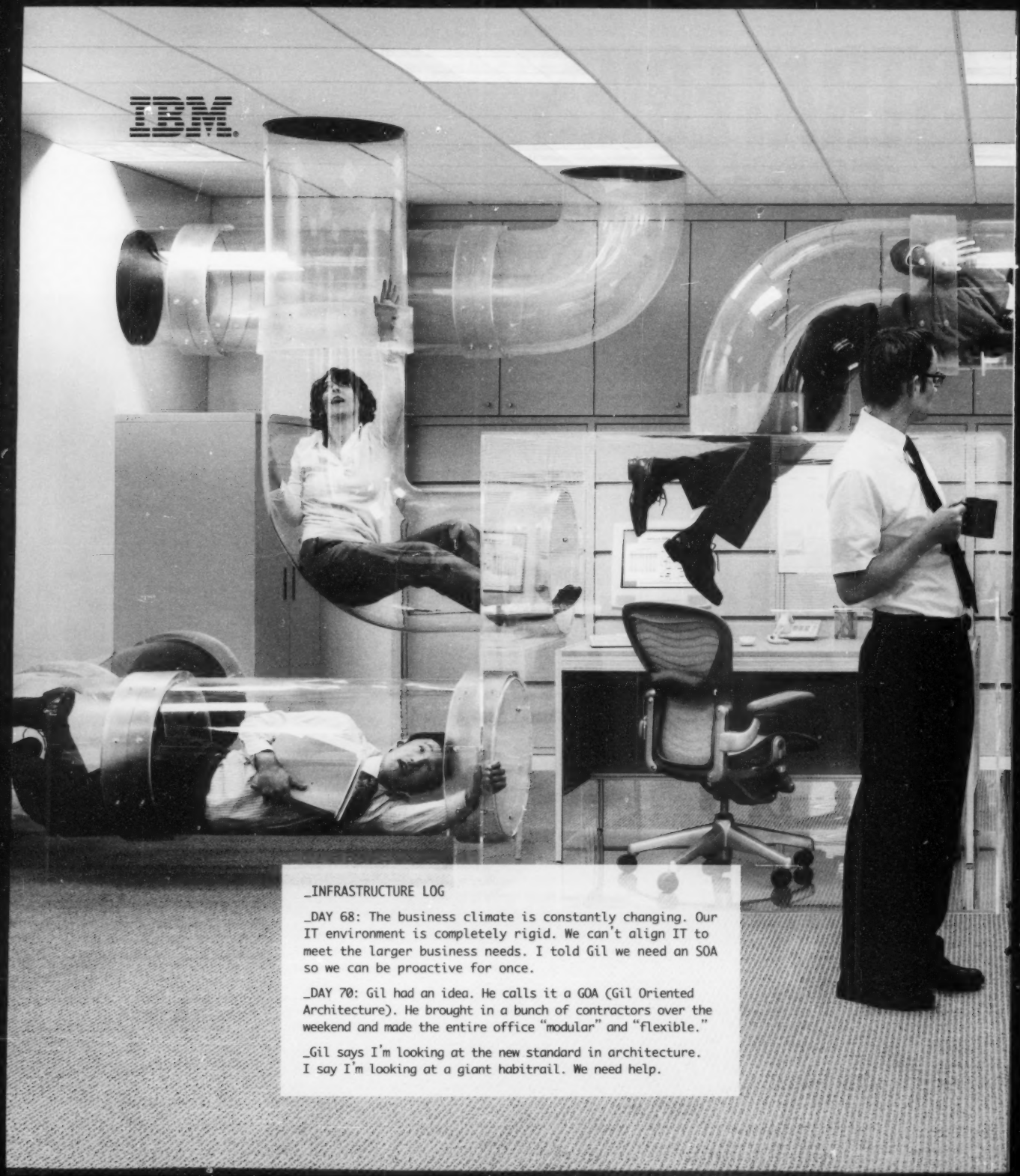
Once idle servers have been removed, data center managers should consider moving as many server-based applications as feasible into virtual machines. That allows IT to substantially reduce the number of physical servers required while increasing the utilization levels of remaining servers.

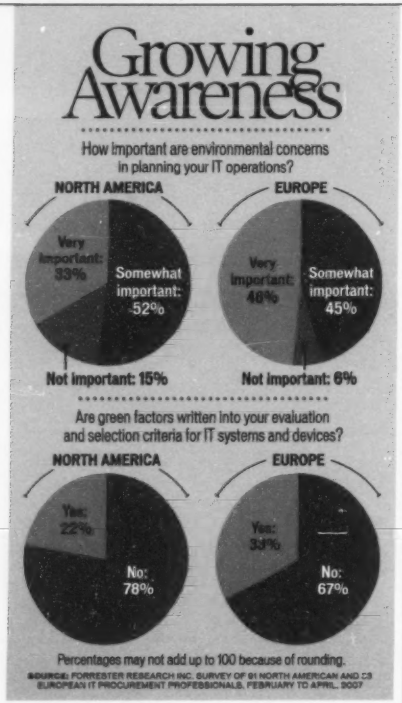
Most physical servers today run at about 10% to 15% utilization. Since an idle server can consume as much as 30% of the energy it uses at peak utilization, you get more bang for your energy buck by increasing utilization levels, says Balkansky.

To that end, VMware is working on a new feature associated with its Distributed Resource Scheduler that will dynamically allocate workloads among physical servers in a resource pool to maximize

Continued on page 26

ILLUSTRATION BY MELINDA BECK


IBM.
_INFRASTRUCTURE LOG
_DAY 68: The business climate is constantly changing. Our IT environment is completely rigid. We can't align IT to meet the larger business needs. I told Gil we need an SOA so we can be proactive for once.
_DAY 70: Gil had an idea. He calls it a GOA (Gil Oriented Architecture). He brought in a bunch of contractors over the weekend and made the entire office "modular" and "flexible."
_Gil says I'm looking at the new standard in architecture. I say I'm looking at a giant habitrail. We need help.


Growing Awareness
How important are environmental concerns in planning your IT operations?
NORTH AMERICA
Very important: 33%
Somewhat important: 52%
Not important: 15%
EUROPE
Very important: 48%
Somewhat important: 45%
Not important: 6%
Are green factors written into your evaluation and selection criteria for IT systems and devices?
NORTH AMERICA
Yes: 22%
No: 78%
EUROPE
Yes: 33%
No: 67%
Percentages may not add up to 100 because of rounding.
SOURCE: FORRESTER RESEARCH INC. SURVEY OF 91 NORTH AMERICAN AND 53 EUROPEAN IT PROCUREMENT PROFESSIONALS, FEBRUARY TO APRIL, 2007

Continued from page 23

energy efficiency. Distributed Power Management will "squeeze virtual machines on as few physical machines as possible," Balkansky says, and then power down servers that aren't in use. It will make adjustments dynamically as workloads change. Workloads might be consolidated in the evening during off hours, for example, then reallocated across more physical machines in the morning, as activity increases.

2. Turn on power management.

Although power management tools are available, administrators don't always use them. "In a typical data center, the electricity usage hardly varies at all, but the IT load varies by a factor of three or more. That tells you that we're not properly implementing power management," says Amory Lovins, chairman and chief scientist at Rocky Mountain Institute in Snowmass, Colo. Just taking full advantage of power management features and turning off unused servers can cut data center energy requirements by about 20%, he adds.

That's not happening in many data centers today because administrators focus almost exclusively on uptime and performance and aren't comfortable with available power management tools, says Christian Belady, distinguished technologist at Hewlett-Packard Co. But turning on power management can actually increase reliability and uptime by reducing stresses on data center power and cooling systems, he says.

Vendors could also do more to facilitate the use of power management capabilities, says Brent Kerby, Opteron product manager on AMD's server team. "Power management technology is not leveraged as much as it should be," Kerby says. "In Microsoft Windows, support is inherent, but you have to adjust the power scheme to take advantage of it." Instead, he says, that should be turned on by default.

You can realize significant savings by leveraging power management in the latest processors. With AMD's newest designs, "at 50% CPU utilization, you'll see a 65% savings in power. Even at 80% utilization, you'll see a 25% savings in power," just by turning on power management, says Kerby. Other chip makers are working on similar technologies.

But power management can cause more problems than it cures, says Jason William, chief technology officer at DigiTar, a messaging logistics service provider in Boise. He runs Linux on Sun T2000 servers with UltraSparc multicore processors. "We use a lot of Linux, and [power management] can cause some very screwy behaviors in the operating system," he says.

3. Upgrade to energy-efficient servers.

The first generation of multicore chip designs resulted in a marked decrease in overall power consumption. "Intel's Xeon 5100 delivered twice the performance with 40% less power," says Lori Wigle, director of server technology and initiatives marketing at Intel Corp. Moving to servers based on these designs should increase energy efficiency. (Future gains, however, are likely to be more limited. Sun Microsystems Inc., Intel and AMD all say they expect power consumption to remain flat in the near term.)

4. Use high-efficiency power supplies.

Power supplies are a prime example of the lack of focus on total cost of ownership in the server market. Inefficient units that ship with many servers today waste more energy than any other component in the data center, says Koomey, who led an industry effort to develop a server energy management protocol.

Inefficient power supplies can waste nearly half of the power before it gets to the IT equipment. Moreover, every watt of energy wasted by the power supply requires another watt of cooling system power just to remove the resulting waste heat from the data center.

To make matters worse, server manufacturers have traditionally overspecified power needs, opting for a 600-watt power supply for a server that really should only need 300 watts, says Rich Hetherington, chief architect and distinguished engineer at Sun. "At that level, [the power supply is] at its most inefficient operating point. The loss of conversion is huge. That's one of the biggest sinners in terms of energy waste," he says.

Power supplies are available today that attain 80% or higher efficiency even at 20% load, but they cost more. Moving to these more energy-efficient power supplies reduces both operating costs and capital costs, however. "If they spent $20 on [an energy-efficient] power supply, you would save $100 on the capital cost of cooling and infrastructure equipment," Lovins says. Any power supply that doesn't deliver 80% efficiency across a range of low load levels should be considered unacceptable, he says.

5. Break down internal barriers.

Although IT has carefully tracked performance and uptime, most IT organizations aren't held accountable for energy efficiency because the IT function is "stovepiped" from the facilities group. IT generates the load, but facilities gets the power bill, says Brill. Breaking down those barriers is critical to understanding the challenge and providing a financial incentive for change.

The stovepiping problem has also afflicted IT equipment vendors, says Lovins. Engineers are now specialized, often designing components in a vacuum without looking at the overall system — or data center — in which their components will play a role.

"The design process that used to optimize a whole system for multiple benefits got sliced into pieces, each with one specialist designing one component or optimizing a component for single benefits," Lovins says. "When the integration was lost, we were less able to see how an integrated design could eliminate noticeable losses."

6. Follow the standards.

Several initiatives are under way that may help users identify and buy the most energy-efficient IT equipment. A certification program called 80 Plus, which was initiated by electric utilities, lists power supplies that consistently attain an 80% efficiency rating at load levels of 20%, 50% and 100%.

Under a congressional mandate, the Environmental Protection Agency is working with Lawrence Berkeley National Laboratory to study ways to promote the use of energy-efficient servers. An Energy Star specification could be in place later this year.

The nonprofit Standard Performance Evaluation Corp. is also working on a performance-per-watt benchmark for servers that should help provide a baseline for energy-efficiency comparisons. The specification is slated for release this year.

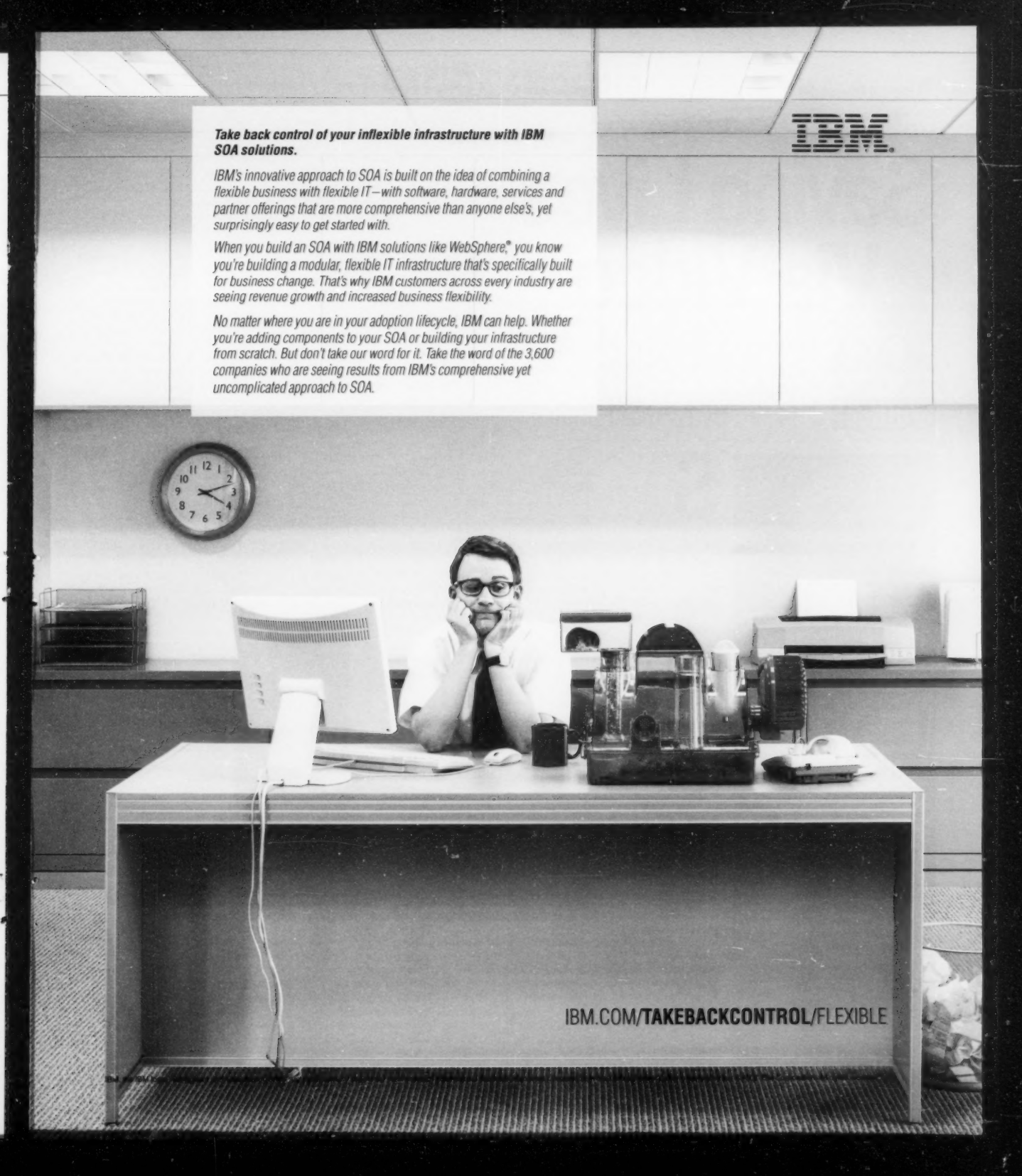
7. Advocate for change.

IT equipment manufacturers won't design for energy efficiency unless users demand it. Robert Yale, principal of technical operations at The Vanguard Group Inc. in Valley Forge, Pa., says his company is involved with The Green Grid and other industry organizations to push for greater energy efficiency.

Joseph Hedgecock, senior vice president and head of platform and data centers at Lehman Brothers Inc., says his company has been lobbying vendors for more efficient server designs. "We're trying to push for more efficient power supplies and ultimately systems themselves," he says.

ADDITIONAL RESOURCES

- Rocky Mountain Institute
- Alliance to Save Energy
- Standard Performance Evaluation Corp.
- Electronic Product Environmental Assessment Tool
- Green Electronics Council
- The Uptime Institute Inc.
- The Green Grid
- Lawrence Berkeley National Laboratory
- 80 Plus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When you build an SOA with IBM solutions like WebSphere,® you know you're building a modular, flexible IT infrastructure that's specifically built for business change. That's why IBM customers across every industry are seeing revenue growth and increased business flexibility.
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IBM.COM/TAKEBACKCONTROL/FLEXIBLE

Saving Lives Via Video

PREMIER 100 SPOTLIGHT

Sutter Health's eICU system has prevented hundreds of deaths and saved millions of dollars. **By Thomas Hoffman**

At a Glance

COMPANY: Sutter Health

BUSINESS: A network of 26 not-for-profit hospitals and physician organizations serving 100 communities in Northern California and one affiliate in Hawaii.

HEADQUARTERS: Sacramento

2006 INCOME: $428 million

IT STAFF: 1,200

THE PROJECT: Implementation of an electronic intensive care unit system to improve the quality of care in Sutter Health's urban and rural facilities.

PROJECT TEAM SIZE: Roughly 120 people across 26 sites.

PROJECT CHAMPION AND SPONSOR: John Mesic, chief medical officer, Sacramento/Sierra region

OTHER KEY PROJECT TEAM MEMBERS: Debbie Sleigh, vice president of information services and project leader; Dennis Martin, enterprise project manager; Grace Bourke, clinical project manager; Jason Szabo, eICU nurse director, San Francisco Bay Area; Teresa Rincon, eICU nurse director, Sacramento/Sierra region; Allen King, eICU support director.

PROJECT INVESTMENT: A $25 million capital investment, including servers and eICU software from Visicu.

PROJECT ROI: An estimated 425 sepsis-related patient deaths prevented; $2.6 million in treatment savings; cases of ventilator-associated pneumonia reduced from 37 in 2005 to eight in 2006.

SEPSIS IS a life-threatening bacterial infection in the bloodstream that kills thousands of people worldwide each year. The condition can be treated effectively with antibiotics, but only if it's detected early enough.

Sepsis has been much less of a problem at Sutter Health since the network of not-for-profit hospitals and physician organizations implemented a set of standard sepsis screening and treatment processes throughout its 26 facilities in Northern California in early 2006. Sacramento-based Sutter Health's sepsis program was made possible by a $25 million electronic intensive care unit (eICU) system that it finished rolling out last December. The setup includes video camera feeds from each ICU patient room and a system that sends patients' vital signs to eICU computer screens that are monitored by doctors and nurses. Among 23,000 patients screened so far, the system has helped Sutter Health's ICU nurses and physicians prevent an estimated 425 sepsis-related deaths, says Teresa Rincon, eICU nurse director for Sutter Health's Sacramento/Sierra region.

The eICU sepsis program has had other measurable benefits as well. "If we can treat sepsis and reduce septic shock, we can decrease a patient's stay in the ICU by an average of four days," says Grace Bourke, a clinical project manager at Sutter Health. Early prevention and treatment have saved about $2.6 million in treatment costs, according to Bourke.

The sepsis program is a prime example of how the eICU system has helped Sutter Health dramatically improve its quality of care over the past few years. The project was spurred by a 2001 visit by former Sutter Health CEO Van Johnson to Sentara Healthcare in Norfolk, Va. Johnson was impressed by Sentara's use of an eICU system, and he thought a similar system would be beneficial at Sutter Health, says John Mesic, chief medical officer for Sutter Health's Sacramento/Sierra region and the clinical sponsor for the eICU effort.

The initial rollout of the system, which is powered by software from Baltimore-based Visicu, began in Sutter's Sacramento facilities in July 2002 and was completed in January 2003.

Several factors contributed to that relatively rapid implementation. (Sutter deployed the system to its two-dozen other California facilities over time, completing the effort late last year.) Rigorous efforts by Sutter Health's IT project and facilities groups enabled the company to gain approvals for the project from the state's chief regulatory authority within a matter of weeks rather than the standard eight to 12 months, says Mesic. "It could have taken three or four times as long if we didn't have that intense effort from our IT and facilities people," he says.

Mesic's staunch support of the eICU project was a huge help in moving it forward, says Debbie Sleigh, vice president of information services and the project leader. "Without John as our spark plug, it would not have gone as well and as quickly as it has," says Sleigh. "From credentialing to adoption, John has [stood] behind this," she says, noting his particularly crucial role in gaining buy-in from the medical staff.

SLEIGH: The eICU system offers patients "immediacy of care."

Cultural Change

Given the cultural changes that an eICU project entails, Mesic's sponsorship was critical. For example, the use of video cameras in patients' rooms and the sharing of clinical data among eICU nurses, physicians and specialists "creates more transparency" than health care practitioners are used to, says Mesic. And standardizing departments on a set of processes is as difficult in health care as it is in any other industry. So the clinical processes required by initiatives like the sepsis program didn't come naturally to some of the medical staffers, he says.

Moreover, an eICU system requires physicians, nurses and specialists to give up the tight personal control that they're accustomed to exercising and work more like a team, jointly supporting one another's patients.

For example, in the past, ICU nurses relied upon on-site clinical experts to review patient information and determine treatments or medications. That approach worked well, but it had limitations. Nurses could consult only with clinicians who were in the hospital at the time, or they could try to reach others by phone. By sharing patient data electronically, eICU nurses are now better able to check with specialists who are off-site. This is particularly useful with specialists such as intensivists, who are in short supply and sometimes available only remotely, says Rincon.

But there has been pushback from clinicians. "Some doctors feel that this is a rather intrusive approach, in that someone is looking over their shoulder and other physicians are adding notes to their patient charts," says Mesic. "It's an issue of control."

"There are many barriers," says Rincon. "You don't just drop in an eICU and expect people to begin using it."

Mesic and Rincon have shared stories and data with reluctant clinicians to help educate them about the benefits of the eICU system and persuade them to use it. "We worked very closely with IT to develop good data sets, and that does tend to change behaviors," Mesic says.

Having strong sponsorship, as well as having local IT project team members work with practitioners to install the systems, enabled Sutter Health to win clinicians over.

And now, Sutter is able to cite a lot of data on the improvements in care that the eICU system has helped generate. That list includes a drop in the number of cases of ventilator-related pneumonia from 37 in 2005 to just eight in 2006. The typical cost of treating such a case is $50,000, says Mesic. So that reduction in incidents of pneumonia alone netted $1.45 million in cost savings.

Then there are the quality-of-life improvements that are shared by physicians and nurses as well as the families of patients. For instance, clinical care physicians historically have had to work long hours and typically suffer burnout by age 45 or 50, says Mesic. With fewer calls in the wee hours from nurses needing to check in with patient updates or change medications, says Mesic, "hopefully this will extend [clinical physicians'] working lives."

For the families of eICU patients, "they're able to see the immediacy of care that patients are now receiving through the eICU," says Sleigh. "It's not something you can quantify."

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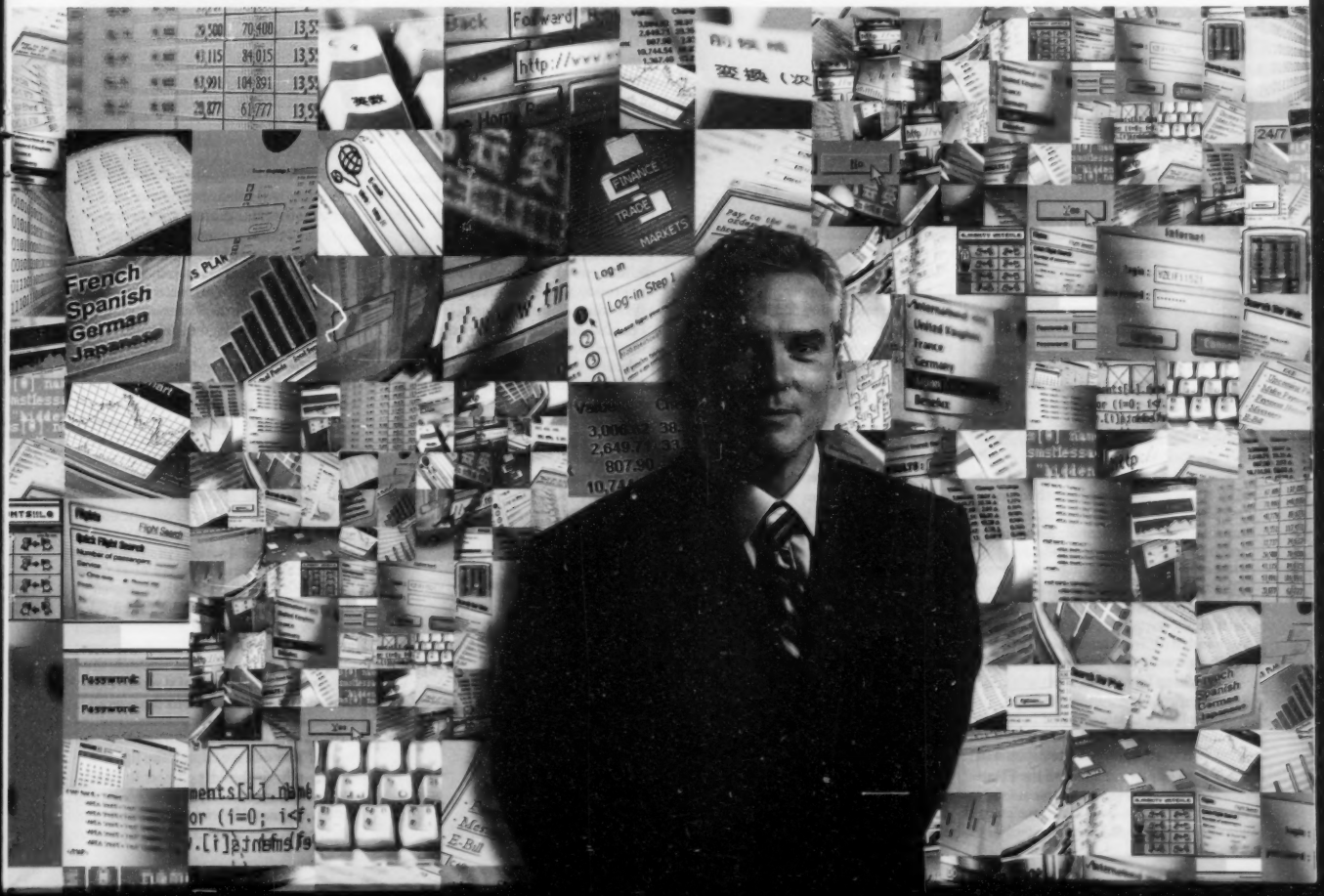

MIDFLIGHT Handoff

How the Atlanta airport's fledgling IT group took over tech support for a huge construction effort midproject. BY THOMAS HOFFMAN

The new fifth runway at Hartsfield-Jackson Atlanta International Airport, shown here while still under construction, was completed under budget and ahead of schedule while the airport's IT team underwent profound organizational change.

BY NEARLY all measures, a $5.4 billion construction project at Hartsfield-Jackson Atlanta International Airport has been a success. The centerpiece of the effort, which began in 1999, was the addition of a new runway at the nation's busiest airport, which logged just under 1 million flights last year. The project also included the addition of new gates and a rental car facility.

The new runway was completed in May 2006, 11 days ahead of schedule and $100 million under budget — an impressive achievement for a construction project of such magnitude. But what makes the accomplishment even more notable is that the project was executed while responsibility for the underlying IT support activities was being handed off from an external group of IT contractors to a city-run agency — one whose IT organization was undergoing profound cultural change.

When Lance Lyttle stepped in as the CIO for the city of Atlanta's Department of Aviation in 1999, the group had an IT staff of just six. Most of the IT activities were handled by supplemental workers, including 20-plus contractors who supported functions from technical support to Y2k preparations.

After Y2k, Lyttle began developing an IT master plan to support the airport's strategic plan. He decided it would make more sense to use permanent employees for work such as network and database administration, so he started building the group's staff by offering jobs to some of the top contractors. "Our salaries were not as competitive at the time as a private-sector entity," says Lyttle. Still, he managed to lure about five contractors into the fold.

Over the next three years, Lyttle added staffers, and the hybrid permanent/contract staff made progress. Since the airport lacked a high-speed data network, the first area Lyttle focused on was network management and IT infrastructure. In 2001, the agency built its first data center at the airport. It houses the telecommunications infrastructure equipment and servers that support applications throughout the airport. In 2003, the fiber backbone for all 5.8 million square feet of the airport was completed.

But another challenge was brewing. Just prior to Lyttle's arrival, the city of Atlanta had tapped a small group of IT consultants as a program team to handle the airport construction project's IT requirements while the Department of Aviation's IT staff grew and stabilized. The program team, headed by Dwight Pullen, handled the bulk of the IT-related work during the early stages of the project. This included database administration, the implementation of a document management system, the development of a Web-based invoicing system to process purchase orders from multiple contractors, and the selection and implementation of a project management system from Primavera Systems Inc. The system was used to track the work done and invoices submitted by the hundreds of consultants working on the airport projects.

Beginning in 2003, the challenge for the department's developing IT group was to gradually take over support for the systems that the project program team had put in place. "We really needed them to adopt these systems and take ownership," says Pullen.

Handing off a project in midflight is difficult under any circumstances. "In this kind of situation, two things must be managed concurrently: the transition of responsibilities and the stability of the project," says Howard Rubin, an analyst at Gartner Inc. "Typically, IT executives underestimate or misunderstand the core skill sets that are in-house" and that are needed to make a project successful, he adds.

Indeed, the initial transfer of responsibilities was hardly smooth. "I'd be remiss to say there weren't any hiccups," says Pullen. For example, a big part of the handoff involved transferring knowledge, but initially, that was hard. Although the department was adding IT staff, it was still relying on contractors, and a steady turnover in their ranks made the transition difficult.

Taking Ownership

A higher hurdle was getting the Department of Aviation IT staff to take ownership of the department. The full-time IT workers "were never accustomed to being in charge," says Lyttle. The contract IT workers had been running the weekly IT meetings and calling the shots on most IT project and support decisions. In fact, during his first week on the job, Lyttle attended an IT staff meeting only to find that there were no permanent IT workers among the 20-plus attendees.

"There was a whole mind-set transition that had to take place," says Lyttle. For instance, one of his network technicians "was afraid to take charge or do anything that might upset" the IT contract workers. Says Lyttle, "I told my staff, 'You people are the owners here, not the consultants.' "

To help build their confidence and position them for management roles, he found training courses for staff members, included them in strategic IT planning and sent them to industry conferences to network with peers. He also revised performance evaluations to rate them, in part, on career development efforts.

"I remember one staff member asking me why they were taking training courses, since they had never taken these courses before. And I told them, 'Because you guys are going to run the airport,' " says Lyttle.

Despite the difficulties, both teams ultimately made the transition work. "It was a combination of both the consultants and staff working together to make it happen," Lyttle says.

Lyttle now manages a staff of 37 with five positions still open. He estimates that the replacement of IT contractors has saved the agency $1.5 million in annual labor costs.

As is frequently the case in such situations, the importance of the role IT played often gets buried in the overall success of the airport infrastructure project. But that's the nature of the beast. "Just like we expect the lights to come on in the building," says Pullen, "IT is such an integral part of what we do [in engineering and operations] that we tend to take it for granted."

HIGHFLYING PROJECT

Here are some facts and figures about Hartsfield-Jackson Atlanta International Airport and the construction project:

- About 88 million passengers passed through the airport in 2005. Forecasts estimate that the airport may serve as many as 120 million passengers in 2010.
- Prior to building a fifth runway, delays at Hartsfield-Jackson plus connection delays to other airports were costing the airline industry an estimated $260 million a year.
- Construction crews used 18 million cubic yards of dirt and other materials to elevate the fifth runway to meet FAA guidelines. That's enough material to fill the Georgia Dome five to six times.
- The runway was built over Interstate 285, a 10-lane highway that loops around metro Atlanta.

– THOMAS HOFFMAN

GREEN BUILDINGS

Automated control systems send vital data over IP-based networks, making facilities smarter and more energy efficient.

By Mary Brandel

> "It's a matter of constantly balancing what we turn on and off, sequencing and timing."
>
> JIM ANNABLE, FACILITIES MANAGER, EDDIE BAUER INC.

There's a lot of focus today on the greening of the data center. But the energy conservation movement and the proliferation of IP-based data transport are also causing IT to pay more attention to building and facilities management, an area that has traditionally been outside its purview.

From sportswear retailer Eddie Bauer to the New York public school system, organizations throughout the U.S. are implementing automated building control systems that send vital data over IP-based networks and are manageable through Web portals. The common goal is to reduce energy costs and comply with green building standards. "Building systems are beginning to use the IT backbone as their medium to get information back and forth from the control systems" to the people who monitor them, says Terry Reynolds, vice president for business development at Control Technologies Inc., a systems integrator in Burlington, Vt., that helped implement the New York schools' system.

In many cases, facilities and building managers work directly with integrators to design and implement these networks. But even then, IT is needed to make critical decisions, such as whether there's enough bandwidth on corporate IP networks for the new data to flow in real time; how to carve out roles for IT, facilities and other departments for managing the new data transport; what security measures should be implemented, especially when the setup involves sending the data across the Internet; and how to set up the network addressing and naming schemes for the new devices.

When Redmond, Wash.-based Eddie Bauer Inc. needed to replace its automated temperature control system at its 2.2-million-square-foot fulfillment center in Groveport, Ohio, it went with the LonWorks system from Echelon Corp., a provider of networks that control and monitor heating, ventilation, air conditioning and lighting systems as well as other equipment.

With LonWorks, facilities manager Jim Annable can track the accuracy of the company's electric bills, as well as monitor trends and analyze data to fine-tune the schedule for turning on and shutting down systems. He can set thresholds for system alarms to notify him of conditions such as excessive temperatures, and he worked with IT to enable the system to page him over the intranet so he can respond remotely to unusual situations.

Annable can also monitor electrical usage in real time via a Web interface to minimize usage during periods of peak demand and thus reduce costs. "Utility bills are based on peak usage, so you want to keep that as low as possible," he explains. "We can shed load by turning off our air-handling units in certain parts of the facility or our high-speed sorting equipment. It's a matter of constantly balancing what we turn on and off, sequencing and timing. If the system calls for an air handler to turn on, and we delay it by 10 minutes, we can avoid being penalized by the utility company."

So far, the system has helped the facility reduce costs by more than $350,000 — just under 20% of its utility budget — and achieve return on investment in less than a year.

Greener Schools

The New York City School Construction Authority is also adopting LonWorks to reduce energy and facility management expenses as it undertakes a massive design, construction and renovation effort for the city's 1,200 schools. The system will also help the agency comply with the Leadership in Energy and Environmental Design initiative, a national standard for green building design.

Reynolds worked closely with the city's IT department to carve out a piece of the existing WAN for data transport from each school to a central location in Queens. "We're sharing a data highway that's typically not used for this kind of [real-time] transport," he says.

"The timing of information can be critical," he adds, like when the school system is trying to respond to a utility provider's request to shed power load.

"We had a lot of discussion about disaster recovery and allocation of channel bandwidth that had to be ironed out," Reynolds says. "Now we're one of the regular users on the WAN."

IT's involvement with these types of systems varies from organization to organization. In the New York school project, IT staffers were present right from the start, Reynolds says, noting that they helped select his company as integrator. IT also helped work out contractual issues for network support roles and responsibilities. "Our interaction with IT was to iron out the grand design and establish grounds for ongoing communication and coordinate things as each school is built," Reynolds says.

At Eddie Bauer, Annable worked with integrator Advanced Control Systems Inc. in Columbus, Ohio, to design and implement the system. Annable first planned to connect the network to the existing corporate network. But just a few months after the implementation, he and the IT group decided to switch to a dedicated Ethernet backbone based on concerns about cost, throughput and security.

"This reduced some cabling costs for the locations we were trying to pick up," he says. Eddie Bauer also liked the idea of having a single point of connection with the intranet via a router so it could establish a firewall there rather than have multiple points of connection, Annable says.

As the green movement grows in the U.S., IT's interaction with facilities management will only increase. "There's no way IT can dodge controls anymore," says Echelon CIO Dick Carlson. "Buildings are just getting smarter."

HOW IT WORKS

In the LonWorks system, a building system's devices – HVAC equipment, light switches and room occupancy sensors – are outfitted with chips. These chips run scheduling, alarm and data-logging applications and also enable the devices to communicate with one another in a peer-to-peer control network via a widely accepted protocol written by Echelon.

The control network interfaces with the i.LON 100 Internet Server, which serves up Web pages to any Internet Explorer-compatible browser. It also acts as a gateway to the corporate IP network, a dedicated IP network or the Internet, providing facilities managers with Web access to the scheduling, alarm and data-logging applications residing in the devices. The i.LON also provides a SOAP/XML Web services interface for integration with corporate applications.

Echelon may be a pioneer in open systems, but it's not the only company offering Web-accessible control networks. Site Controls Ltd. offers an open-source, Internet-enabled energy management system that allows retail, restaurant and convenience-store franchises to monitor and control their building systems to minimize energy costs. The rest of the competition is largely from makers of proprietary systems, such as Johnson Controls Inc. and Delta Controls.

– MARY BRANDEL

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Simple SANs Deliver Savings

Their ease of management can enable midsize businesses to cut costs by up to 70%, but they're not for everyone.

By Robert L. Scheier

Jeff Pieper's marketing design business runs on data, and he doesn't mind swapping out a server or fiddling with cabling here and there. But spending 45 minutes a day moving, compressing, decompressing and deleting files just so his 21-person staff could do their work was too much for Pieper, president of Pieper and Associates in Torrance, Calif.

Rather than buy more servers and network-attached storage (NAS) appliances as his workload grew, he bought a Hitachi Data Systems Plug-and-Play SAN Kit with 4TB of capacity. At about twice the price of a server, it seemed like an expensive risk. "Nobody our size has anything like this," Pieper says. "Everybody was just getting another NAS and another NAS" appliance as their needs grew.

But a year later, Pieper says, the Fibre Channel SAN has more than paid for itself by letting him spend more time closing new business and less time — now only about two hours a month — fiddling with storage.

Pieper's story is typical of small and midsize businesses. Customers and industry analysts say the new, comparatively low-priced SANs — many bundled with preconfigured switches and host bus adapters — are easy to install and can cut management costs by up to 70% compared with storage directly attached to each server.

But they're not for everyone. Low-end SANs often lack strong encryption, continuous data protection, and local and remote replication — features that may be required by businesses in heavily regulated industries, such as financial services. Such features are available in some vendors' "simple SANs," but they may boost the cost beyond what a midsize company can afford, according to Tom Trainer, an analyst at research firm Evaluator Group Inc. in Greenwood Village, Colo.

Keeping It Simple

These simple, or plug-and-play, SANs use either the Fibre Channel or iSCSI protocol, although low-end iSCSI SANs have received more attention because of their affordability.

Internet SCSI allows the SCSI commands needed to communicate with Fibre Channel drives to be transmitted over Ethernet. This reduces hardware costs, since most offices have Ethernet networks.

iSCSI also reduces management costs, since network administrators can install and manage storage networks without extensive retraining. Because of such benefits, research firm Gartner Inc. estimates that sales of iSCSI SANs in the small to midsize business market will grow from $300 million in 2006 to $2.8 billion in 2010.

The iSCSI SAN hardware costs 20% to 40% less than comparable Fibre Channel hardware, but both types of simple SAN reduce administrative costs with easy-to-use software that automatically creates and resizes volumes, migrates and compresses data, and moves data among volumes and arrays as needed.

Among the major iSCSI SAN vendors are LeftHand Networks Inc., EqualLogic Inc., Network Appliance Inc., Intransa Inc., EMC Corp. and Dell Inc. Vendors on the Fibre Channel side include EMC and Hewlett-Packard Co.

Many low-end SANs are deployed to move companies away from disk drives directly attached to servers and to store bulky files generated by Microsoft Exchange e-mail servers. When the Jefferson Union High School District in Daly City, Calif., relied on direct-attached storage (DAS), it had to impose strict quotas on the e-mails and files that teachers and students stored on the network servers. But since installing Hitachi's Plug-and-Play SAN Kit with 8TB of storage, the district has encouraged students to post portfolios of their work online, says Lou Silberman, technical director of the school district.

Denver-based software vendor Quark Inc. purchased two 6TB Network Storage Module (NSM) arrays from LeftHand Networks about a year ago to store Exchange data, user files and software source code, says Mark Lawler, vice president of IT. He says he chose NSM for its ease of use and because it cost less than rival products from EMC and Network Appliance.

Although Lawler and his staff had to create volumes and authentication groups — "normal tasks you have to do with any SAN or NAS" — and had "never seen a LeftHand product before," they had the SAN up in two days, he says. Lawler estimates that his SAN has cut his storage management costs by 70% compared with the previous DAS system.

Hitachi installed the SAN for Silberman, but his staff was able to use the management software to reconfigure the array with only 30 minutes of training. He estimates that his staffers spend 20% to 30% less time managing the storage than they did before.

Several SAN customers also praised the ease of adding more storage to iSCSI SANs. Pieper, for example, says that if his current SAN runs out of space, "all I have to do is get another box and plug it in the back, and it keeps on going."

Implementation Tips

The Ethernet networks used by iSCSI SANs are slower than Fibre Channel, since they top out at 1Gbit/sec., compared with 4Gbit/sec. for the latest Fibre Channel hardware. But the performance gained by moving to a SAN from direct-attached storage is so great that many midsize businesses don't miss the speed of Fibre Channel.

However, data ware houses or multimedia applications could slow down Ethernet networks because they move large blocks of data at the same time, Trainer says. For such applications, consider Fibre Channel SANs or at least putting the iSCSI SAN on a separate network segment.

Greg Schulz, an analyst at The StorageIO Group in Stillwater, Minn., questions whether the graphical management tools so useful for today's comparatively small SANs will still be effective "when you have to install 200 or 500 ports on a server."

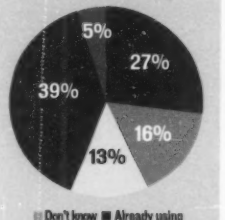
Gartner analyst Roger Cox recommends that small and midsize businesses equip their servers with dual host bus adapters or interface cards, as well as dual switches and storage controllers, to ensure uptime if one fails.

Finally, analysts say, be sure your low-end SAN vendor provides virtualization capabilities that make it easy to combine your various physical SANs into one virtual pool of storage as your storage volume grows.

For many midsize companies still looking to move off of DAS, these concerns are down the road while the benefits are immediate. As Silberman says, "It's a great relief to get this massive amount of storage, at this kind of price and this kind of easy functionality."

SANs PLANS

Deployment Of IP SANs or iSCSI Storage



BASE: 453 North American IT decision-makers

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A Funny Thing Happened On the Way to Certification

Our manager got off on the wrong foot at her CCSP training, until she remembered the value of humor in getting through even the most trying situations. By C.J. Kelly

SECURITY MANAGER'S JOURNAL

A TIME-HONORED tradition among technical people is to use percussive maintenance: When a piece of equipment isn't working properly, give it a good whack.

As I headed into a week of intensive technical training, I felt as if I were the faulty piece of equipment and thought the instructor would have to hit me over the head if any information was going to sink in. I worried that I wouldn't be able to switch gears from my politically impossible management role to learning about command line interface, the final leg of my journey toward the Cisco Certified Security Professional certification.

Much as I was looking forward to achieving my goal, I was scared as well. The material was supposed to be highly technical. In fact, the training had been rescheduled three times because students kept dropping out, leaving the enrollment below the required minimum. As it was, because of a no-show, there were only three students.

A Rocky Start

I fell behind immediately, because the other students finished their lab work well ahead of me. I was the old lady between two fresh and extremely bright young men.

It wasn't a great start, so after the first day of classes, I took stock of things and thought about how to set a better course for the rest of the week. The first thing to deal with was the fact that I was the only woman in the class. Well, that's nothing new. By this time in my career, I should be used to standing out in a field that's dominated by young males. Nonetheless, I am often surprised at how my presence affects others. They are just not sure how to behave toward me. I know that I have to be the one to set the tone and reach out first.

My second task was to squelch my self-doubts, which can be legion in certain circumstances. Most of the time, I have total confidence in my abilities. But from time to time, I forget all my accomplishments and start to feel overwhelmed. I had to gather my thoughts and convince myself that there was nothing in the course that couldn't be mastered by someone as dogged as me. I would just have to focus and block out everything else.

The next morning, I woke up ready to rock 'n' roll. I arrived early to class and began working on the lab assignments ahead of the lecture. I finished my work early that day and felt as if I was in the groove. My feelings of inadequacy had been banished, and I attempted to connect with the other two students and the instructor. It was amazing how easily they relaxed when I did. They figured out pretty quickly that I was just like them in many ways and had the same goal: technical network security expertise.

> What really made things start to click for the four of us was humor. I got things rolling by poking playful fun at the instructor.

Fun and Games

But what really made things start to click for the four of us was humor. I got things rolling by poking playful fun at the instructor. The man was a true geek, a veteran network engineer with great credentials and years of experience. He seemed to have a fondness for overly complicated phrases and big words, and after a while, I began to get the giggles. At first, he would stop his lecture and stare at me, but by the third day, it had become a game for me to write down every overblown phrase he used and to ask him to decode them for us. We students started to come to class in jovial moods, and that fostered camaraderie. We all talked about the stuff we didn't understand and helped one another with our labs. Even the instructor loosened up and started telling very old jokes, most of which we had heard before. We laughed anyway.

On the last day of class, we had fun reading the April Fools' Day RFCs (you can find them on Wikipedia) to one another during the short lunch break. Our favorite was "IP Over Avian Carrier." We sailed through our labs and finished early. Two of us used the extra time to diagram our actual networks on the whiteboards so that the others could point out security weaknesses and propose solutions, such as modifications to router, firewall and VPN configurations. I was thrilled that our instructor gave his blessing to network changes I was implementing at work.

On the flight home, I thought about the group dynamics I had witnessed in the course of the week. Humor is such a simple thing, but it's amazing how it can brighten the days and grease the gears of our brains. It allowed our little group to change the tenor of the class in a positive way, so that we all left with a better understanding of the material that had been so intimidating on the first day. Then I realized that back at my job, I had forgotten how important humor is. Things had been so stressful over the past year that laughter had disappeared. Now, I'm determined to bring it back and see if it can't make my politically impossible management role a little easier to bear. After all, a good laugh beats percussive maintenance any day.

GEEK NUGGET

All you fellow Cisco certification test-takers out there might want to check out an open-source router simulator, described as a "router simulator on steroids," at www.ipflow.utc.fr/index.php/Cisco_7200_Simulator, and the GUI at www.dynagen.org.

WHAT DO YOU THINK?

This week's journal is written by a real security manager, "C.J. Kelly," whose name and employer have been disguised for obvious reasons. Contact her at mscjkelly@yahoo.com, or join the discussions in our security blogs: **computerworld.com/blogs/security**.

To find a complete archive of our Security Manager's Journals, go online to **computerworld.com/secjournal**.

SECURITY LOG

Ohio Data Theft Prompts Review

Personal data on all 64,467 of Ohio's state employees and tens of thousands of other people, including Ohio teachers and recipients of state health care benefits, was stolen from the car of an intern entrusted with protecting the data. The theft took place on June 10 and prompted Ohio Gov. Ted Strickland to issue an executive order requiring state IT managers to immediately review and, if need be, change their data protection measures.

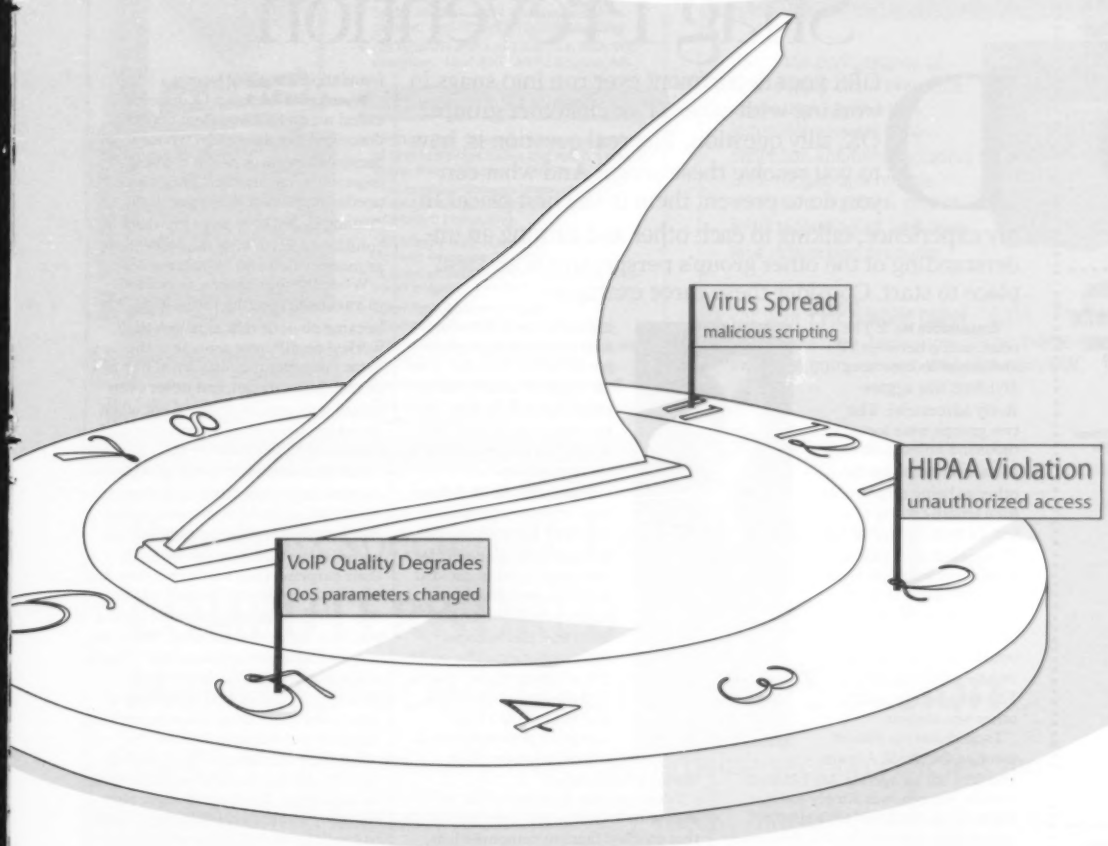
Google Releases Antiphishing APIs

Google Inc. released to outside developers the security application programming interface used in Google Desktop and Mozilla Corp.'s Firefox to ward off phishing and malware-spreading Web sites. Dubbed the Safe Browsing API, it lets third-party developers equip their applications with the ability to check for malicious sites, said a pair of Google developers in an entry on the company's security blog. Google suggested that developers could use the API to prevent users from posting phishing links on a blog or to alert users that a link from a software download site is a known malware distributor.

U.K. Takes a Look At Human Error

The U.K.'s Department of Trade and Industry has set aside £4 million ($7.9 million U.S.) to fund four research projects addressing what the DTI called the biggest threat to network security: human error. The DTI will use behavioral science in a bid to tackle that hazard, according to British Web site *The Register*.

Turn back network time.



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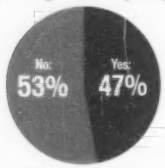
QUICK HITS

IT Vendor Management

Does your company have a centralized vendor management organization (VMO)?



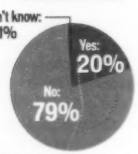
Base: 615 IT decision-makers at North American companies

During the next 18 months, are you planning to reduce the number of IT vendors your company deals with?

Companies with centralized VMOs

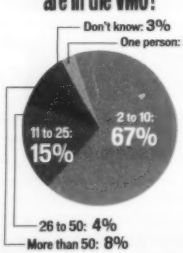
Base: 292 IT decision-makers at North American companies

Companies without centralized VMOs



Base: 323 IT decision-makers at North American companies

How many staff members are in the VMO?



Base: 292 IT decision-makers at North American companies with centralized vendor management groups.

SOURCE: FORRESTER RESEARCH INC., CAMBRIDGE, MASS., APRIL 2007

NAOMI KARTEN

Lessons in Snag Prevention

DOES your department ever run into snags in working with other IT or customer groups? OK, silly question. The real question is, how to you resolve these snags? And what can you do to prevent them in the first place? In my experience, talking to each other and gaining an understanding of the other group's perspective is an ideal place to start. Consider these three examples:

Organization No. 1: The relationship between IT and one of its customer divisions was aggressively adversarial. The two groups were located a thousand miles from each other, and each saw the other as being responsible for a lengthy string of snafus. I'd been invited to help IT establish a service-level agreement with this business unit, but everyone I met in both IT and the business unit doubted they could ever reach agreement — about anything. Their disdain for each other was blatant.

I scheduled the kickoff meeting for the SLA team and sent out an agenda. My hidden agenda, though, was simply to have these IT and business unit people spend time together, face-to-face, away from their everyday squabbles. The meeting started off somber, serious and SLA-focused. But gradually, the conversation began to intermittently detour to nonwork topics — their kids, the cost of gas, the fumble in last night's game — a sign that they were starting to relate as human beings rather than as fuming, frustrated finger-pointers.

Amazing though it may seem, before long, they were bantering, joking and (unimaginably!) laughing together. This levity marked a transition: Adversaries who laugh together don't remain adversaries for long. This kickoff meeting certainly didn't eliminate the challenges of negotiating the SLA. But it set the stage for a cooperative effort that led, in time, to a successful agreement and a significant improvement in service quality.

NAOMI KARTEN (www.nkarten.com) is author of several books and ebooks, including *Changing How You Communicate During Change*. Her presentations and seminars help organizations improve customer satisfaction, manage change and strengthen teamwork. Contact her at naomi@nkarten.com.

Organization No. 2: Following a massive reorganization (you know the kind!), the manager of one IT department astutely decided to hold a session for her staffers and the business units that had become their customers. The objective of the meeting, which I was invited to facilitate, was to help the IT and customer personnel build a foundation for their working relationship.

I designed the first half of the session with activities and discussions that enabled them to compare ideas, tackle lighthearted problems and laugh together. In the process, they began to know one another separately from their responsibilities and priorities.

The second half of the session focused on fostering a deeper level of communication and an appreciation of one another's pressures and priorities. Frank discussions about what was important to each group about working with the other enabled each to gain insight into the other's challenges, uncertainties and concerns. The two groups made significant strides in building a foundation of trust and respect. A year later, the manager reported that the foundation remained strong.

Organization No. 3: An IT director called me and with evident concern described four IT groups whose personnel were, as he put it, about to strangle one another. The groups needed to interact to support their customers, but they were hip-deep in conflict, each viewing the other three as incompetent and indifferent.

When the four groups assembled in an off-site meeting room, it quickly became obvious that although they worked on different aspects of the same customer requests, most had never met. Most, in fact, had never even talked with one another, except when thrashing through problems that each saw as the fault of the others.

I divided them into small groups comprising people from each department and assigned discussion topics that focused on their customers' concerns rather than on their own. To their surprise, they found that they had a lot in common, not least of which was that they all really wanted to do a good job for their customers. They discovered false assumptions they'd made about one another's roles and constraints and discovered that some of their most frustrating snags in working together had simple solutions.

For their closing activity, I invited them to discuss the next steps for their relationships. Their conclusion: Now that they'd started talking, they wanted to continue to communicate back on the job, and they identified several options for doing so. This brief session didn't transform a battleground into a hug-athon, but it marked the start of mutually supportive relationships.

The moral to these stories: Even when it seems otherwise, most people would really prefer to get along. In these examples and many others that I've witnessed, good things have happened to people who have taken the time to talk.

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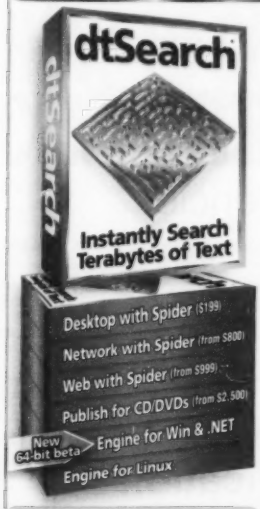
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Linux

neath the iceberg yet."

But Colt Jackson, a systems engineer and AIX technical expert at health insurer CareFirst Inc. in Owings Mills, Md., said in an e-mail that there are two sides to the Microsoft vs. Linux story.

"On one hand, it's a sexy story to portray this as a bit of a David vs. Goliath [battle], or a shakedown," Jackson wrote. "On the other hand, if a company does not defend its patents, it will effectively lose control of them."

CareFirst is the parent company of CareFirst BlueCross BlueShield, which insures 3.1 million people in Maryland, Virginia and the District of Columbia. Jackson, who runs some utility applications on top of SUSE Linux at CareFirst, said he isn't worried about any fallout from Microsoft's patent claims. But, he added, "if I were running a highly specialized application on a smaller [distribution], I might be concerned enough to have a contingency plan."

Deal or No Deal?

The intellectual property issue came to a head after Microsoft executives asserted last month that Linux and other open-source technologies infringe on 235 of its patents. The Microsoft officials said that they wanted to sign more deals like the one with Novell, which agreed to pay Microsoft a share of the revenue from sales of SUSE Linux.

Kevin Carmony, CEO of San Diego-based Linspire, said in a statement issued June 13 that his company's agreement with Microsoft was designed to give users "improved interoperability, enhanced functionality and confidence."

> **"It's a sexy story to portray this as a bit of a David vs. Goliath [battle], or a shakedown. On the other hand, if a company does not defend its patents, it will effectively lose control of them."**
>
> COLT JACKSON, SYSTEMS ENGINEER, CAREFIRST INC.

But in his blog posting last week, Mandriva's Bancilhon contended that "absolutely no hard evidence" has been produced showing that Linux or other technologies infringe on any patents. "We don't believe it is necessary for us to get protection from Microsoft to do our job, or to pay protection money to anyone," he wrote.

On June 16, Ubuntu Linux founder Mark Shuttleworth wrote in his personal blog that Ubuntu and Canonical officials had declined to discuss any deals with Microsoft "under the threat of unspecified patent infringements." That came one day after Linux market leader Red Hat reiterated that it wasn't interested in negotiating an agreement.

In a statement e-mailed last week by Microsoft's public relations agency, David Kaefer, the software vendor's general manager of intellectual property and licensing, said Microsoft "remains committed to working with all companies that have a shared interest in building the bridge between open-source and proprietary software."

"Microsoft has been buying up deals with little fish and companies that aren't quite making it financially," open-source advocate Bruce Perens said, referring to its agreements with Novell, Linspire and Xandros. But the vendors that have resisted its offers are taking the right stand, he said.

Jonathan Eunice, an analyst at Illuminata Inc. in Nashua, N.H., agreed that companies like Xandros and Linspire were "softer targets" for Microsoft. Vendors like Red Hat and Canonical "don't need to take out the insurance policies" with Microsoft on its infringement claims, Eunice said.

But Laura DiDio, an analyst at Yankee Group Research Inc. in Boston, said it makes sense for some of the Linux vendors to sign deals with Microsoft that indemnify their customers against any claims.

"It can impact enterprise users if somebody decides to sue for patent infringement . . . and they don't have any protection in place," DiDio said. "That is always a danger."

Continued from page 1

DHS Security

nie Thompson (D-Miss.) from launching verbal salvos at Charbo. Thompson, who chairs the House Committee on Homeland Security, said he had reviewed Charbo's responses to a series of security-related questions posed by the panel's subcommittee on emerging threats, cybersecurity, and science and technology in advance of the hearing.

Based on the responses, "I think the first thing that Mr. Charbo needs to do is explain to us why he should keep his job," Thompson said. "I am not convinced that he's serious about fixing the vulnerabilities in [the DHS's] systems."

Thompson's criticism of Charbo was echoed by Rep. James Langevin (D-R.I.), the subcommittee's chairman. In his opening remarks at the hearing, Langevin expressed his "shock and disappointment" at learning that the DHS had reported a total of 844 security incidents during the federal government's 2005 and 2006 fiscal years.

Langevin also said he was dismayed by what he claimed was Charbo's unwillingness to invest the needed resources to correct such problems. "The finances show that Mr. Charbo and the department's leadership continue to underinvest in IT security," Langevin said.

'Material Weakness'

Adding more fuel to the fire was a report released last week by the Government Accountability Office, which said it had found pervasive and systemic security problems at the DHS during a yearlong review.

Among the issues highlighted by the GAO were a "material weakness" in the security controls on financial systems, the lack of an effective agency-wide information security program and a continued failure to conduct comprehensive assessments of security risks.

Keith Rhodes, the GAO's chief technologist, said at the hearing that eventually his staff simply stopped looking for more vulnerabilities in the systems at the DHS and its component units because the problems were so widespread.

But Christopher Pierson, a partner at law firm Lewis and Roca LLP in Phoenix and a board member in the local chapter of the FBI's InfraGard security information-sharing program, said that blaming Charbo for all of the problems at the DHS is unwarranted.

"DHS is faced with a unique problem," Pierson said. "It has a patchwork of 22 agencies that have been stitched together, do not share similar systems or security processes, and function very differently."

And until DHS Secretary Michael Chertoff issued a directive in March giving the CIO greater authority over IT on an agencywide basis, Charbo really didn't have the clout needed to make meaningful changes, Pierson said.

Charbo said during last week's hearing that the DHS has completed an inventory of its systems and has made significant progress in certifying that they meet Federal Information Security Management Act (FISMA) standards.

The DHS is also in the midst of three IT consolidation projects that will have a significant impact on security, Charbo said. They include the creation of a single WAN called OneNet, featuring IPsec-based encryption and authentication; the development of an enterprise architecture that consolidates 13 different e-mail and directory systems into one; and the melding of multiple data centers into a shared facility in Stennis, Miss.

In addition, Charbo defended his agency's IT security spending, saying it was on par with industry standards.

Alan Paller, director of research at the SANS Institute in Bethesda, Md., said Charbo's record on information security is similar to those of a majority of CIOs at large federal agencies. But, he added, at least some of the FISMA compliance efforts at the DHS appear to have been paperwork exercises that have done little to actually improve security.

IT POLITICKING

> **"I think the first thing that Mr. Charbo needs to do is explain to us why he should keep his job."**
>
> U.S. REP. BENNIE THOMPSON (D-MISS.)

> **"I'm confident that the DHS information security program is moving in the right direction."**
>
> SCOTT CHARBO, CIO, DEPARTMENT OF HOMELAND SECURITY

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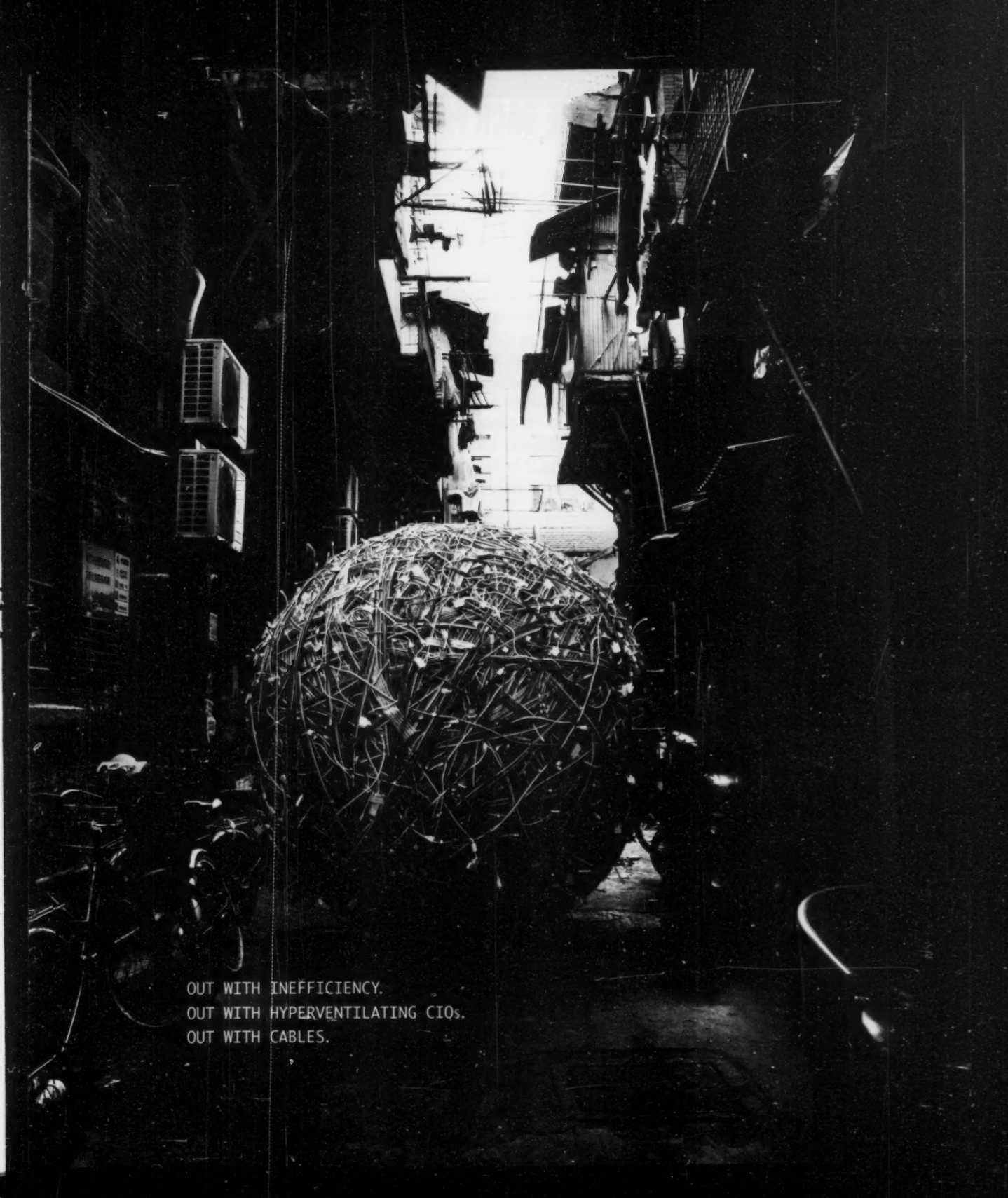
OUT WITH INEFFICIENCY.
OUT WITH HYPERVENTILATING CIOs.
OUT WITH CABLES.

FRANK HAYES ■ FRANKLY SPEAKING

-30-

WELL, this is it: the final issue of the original *Computerworld* newspaper. Almost exactly 40 years ago, Patrick J. McGovern decided that the data processing world needed a publication that wouldn't be in the pockets of the vendors who advertised, like too many industry magazines at the time. McGovern's newspaper was launched quickly on a shoestring budget, printed on cheap newsprint and laughed at by advertisers who knew it could never succeed.

It succeeded. The advertisers stopped laughing. The budget got fatter. The paper got slicker. And now, a mere 2,056 weekly issues later, *Computerworld* is changing to a magazine.

Does that really make a difference? Yes, it does.

A few weeks ago, I sat with a hundred close friends of *Computerworld*, listening to McGovern talk about the earliest days of the newspaper. Though his stories were from four decades ago, they all had a familiar ring. That was partly because a newspaper is a newspaper; chasing stories, beating deadlines and tearing up the front page for breaking news hasn't changed much in 40 years.

But something else was very familiar. From the very beginning, *Computerworld* has been first and foremost an advocate for people working in corporate IT shops. Not for the IT industry — for IT people.

A tabloid newspaper was perfect for that mission. Like real IT work, it wasn't slick and pretty, but rough, messy and a little rushed. *Computerworld* didn't present a beautiful, glossy image of IT products, vendors and projects; it found flaws, pointed up problems and talked about both what worked and what didn't.

And unlike the monthly magazines, *Computerworld* got IT news to its readers in days, not weeks. That's when readers needed it, and that's when they got it.

Forty years on, readers still need their IT news fast. But today, it's the newspaper that's the slowpoke.

Today, almost nothing in *Computerworld* hasn't already appeared on *Computerworld.com* — often in several versions as news develops — by the time the newspaper hits readers' desks.

And the Web site isn't just faster. It also has the endless room of the Internet to provide details, context, background and even links to IT-related information that doesn't come from *Computerworld*, but that *Computerworld* readers need.

Best of all, *Computerworld.com* isn't just focused on what IT people need. With the Web site's ability to let readers comment, it's an ongoing conversation — one that's actually driven by IT people in real time. That's more than the newspaper could ever be.

Computerworld the newspaper really has been replaced by *Computerworld.com*. And now this paper-and-ink edition is being replaced by a magazine. (It's ironic that *Computerworld* was originally cheaper to produce as a newspaper than as a magazine, and now it's being converted to a magazine because *that's* cheaper today. But there's progress for you.)

The new *Computerworld* can't get readers the news as quickly as *Computerworld.com* — or in as much quantity. Instead, *Computerworld* will be a tighter, faster read than the Web site, with a sharper focus and more analysis. The magazine will still be conveniently portable and will still make it easy for readers to mark up, tear out and pass around articles.

And, yes, *Computerworld* will still have Shark Tank, in its new home just one page away from this column.

But it won't be a newspaper.

So this is it: the last page of our last newspaper issue. And as usual, Sharky and I get the last word.

Newspaper reporters traditionally mark the end of their stories with -30-. Many *Computerworld* reporters will still do that, but this is really the last time we can do it legitimately. After this week, we won't be working for a newspaper any longer.

But — just as we have for 40 years — we'll still be working for you.

See you on July 9.

FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at **frank_hayes@computerworld.com**.

Unclear on the Concept

User calls pilot fish to fix her fax machine, and he knows two other techs have already checked it out and given her the bad news – the phone line for the device is dead. "I go out and do the same thing, to which she replies that she knows the phone is dead," says fish. "They hadn't paid their bill, so she was picking up the phone receiver on the fax and attempting to make calls on it. I explained that you needed a phone line for that, but she was adamant. 'A fax doesn't use phone lines,' she said. 'It uses fax.'"

Toned Down

Customer service supervisor sends a request to this help desk pilot fish: "We need a toner replacement for our desktop scanner. There seems to be a problem with the scanning image. The image is very light in color."

Squishy

Help desk pilot fish gets a call from a user having trouble sending files to her assistant. "She described the process she was going through to do this – loudly and unclearly," fish says. "About the only salient point I heard was that somehow the documents were ending up 'squished' and didn't look right when they arrived on the other end. I suggested she try using the paper clip function to attach a file. Then I listened as she and her assistant yelled back and forth at each other regarding their success with this method. The user informed me that my suggestion had indeed worked for one file. I gave her my extension and asked her to call back if any more files were 'squished.'"

SHARK TANK

You Asked for It

These two users need to print color name badges for a big-deal corporate event, but they can't get what they need. "After several attempts at printing to their local color printer, they only get black and white," reports a pilot fish on the scene. "They abandon the local printer and print to a remote one with success. After they call a technician to check out what's wrong with the first printer, he finds that the printer works just fine. They had checked 'print in black and white' on their computer."

SHARKY'S OUTTA HERE. There literally won't be enough room on one page for both me and that other guy once *Computerworld* goes to magazine size, so look for Shark Tank one page farther in when we return on July 9 after a week of retooling. While you're waiting, send me your true tale of IT life at **sharky@computerworld.com**; I'll send you a sharp Shark shirt if I use it. And don't forget to check out Sharky's blog, browse the Sharkives and sign up for Shark Tank home delivery at **computerworld.com/sharky**.

Tired of bungling bosses and clueless consultants? Get it off your chest at Shark Bait: **sharkbait.computerworld.com**.

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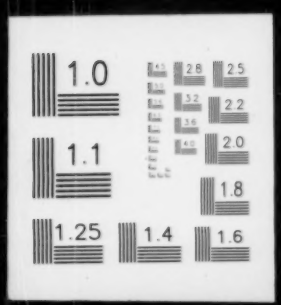
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